ANNUAL
REPORT
2023

Department of Statistics

Nirmala College Muvattupuzha

FOUNDED 1953

PREFACE

It is with great pleasure that we present the annual report of the Department of Statistics for the academic year 2022-23. The year has been filled with exciting events and opportunities for our students, and we are proud to report on the successes and achievements of our department.

We began the academic year with an induction program for our new students, providing them with a warm welcome and introduction to the department. Throughout the year, we organized several skill-sharing programs and certificate courses to enhance the knowledge and skills of our students. We also provided internship opportunities to our students to gain practical experience and learn from real-world situations.

One of the highlights of this year was the invited talks by many leading data scientists, who shared their insights and experiences with our students, providing them with valuable insights into the latest trends and developments in the field of statistics. We also offered a foreign language course in German, providing our students with an opportunity to enhance their communication skills and expand their cultural horizons.

Our faculty members have been dedicated to providing our students with the best possible education and have worked tirelessly to ensure that our department continues to be a center of excellence in statistics. We are proud of their hard work and commitment to our student's success.

Overall, it has been an eventful and successful year for the Department of Statistics at Nirmala College Muvattupuzha. We look forward to continuing our tradition of excellence and providing our students with the skills and knowledge they need to excel in their careers. This report captures all the major events that happened across the year and again proves that with the support of students, retired teachers, and alumni we can embrace any challenge with confidence and continue to maintain its robust growth trajectory.

Finally, I thank all my students, colleagues, retired teachers, alumni, and management for extending their cooperation in the all-round development of the Statistics department.

Muvattupuzha,   **Dr. T. M. Jacob**
31-05-2023   HoD, Statistics

Statistics-Team

Dr.T.M.Jacob
Asso. Professor

Dr.Albin Paul
Asst. Professor

Mr.Linto Joseph
Asst. Professor

Ms.Aneeta Antony
Guest Faculty

Ms.Rafflesia Chackochan
Guest Faculty

Student Reps

Basil Regy

Elizabath Mathews

Anet Paul

Ansan Babu

Second Year M.Sc

First Year M.Sc

MSc Statistics-Second Year Students

Click on the name below the photo to visit the student's LinkedIn profile.

Yadhukrishna R	**Aneetta Joy**	**Rohith A Sivarajan**	**Anumol Sukumaran**
Nimmi Benny	**Dona Jose**	**Jyothis Mariya A. J**	**Basil Varkey**
Basil Regy	**Ashily Benny**	**Ajila Abbas**	**Elizabath Mathews**
Gayathri Suresh	**Nikitha Mathew**	**Basil Mathew Biju**	**Aneetta P Benny**
Akhila Johnson	**Jithu Rose Abraham**	**Delsa Jose**	**CV DataBase**

MSc Statistics-First Year Students

Click on the name below the photo to visit the student's LinkedIn profile.

Aanet Paul

Abishag Joy

Alja Gifty T

Anandhu Krishnan

Ansan Babu

Ashly Sebastian

Devika V

Elna Mathew

Irin Tomy

Kalyani A

Milan S Kavalayil

Manikandan P.C

Minnu T.R

Parvathy M Nair

Saliya Martin

Shalini CK

Vibina R

Sreelakshmi T Unni

Congratulations....

SNEHA ANN BOBAN
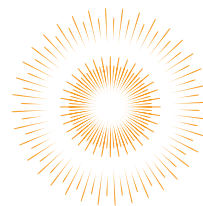CGPA (4.84/5) Position 1

ALEENA SHAJI
CGPA(4.65/5) Position 4

MINNU MATHEW
CGPA (4.61/5) Position 6
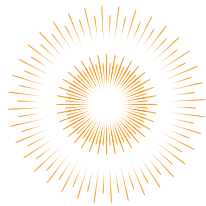
LAKSHMI VIJAYAN
CGPA (4.60/5) Position 7

ATHIRA K P
(CGPA 4.50/5) Position 10

DEPARTMENT OF STATISTICS , NIRMALA COLLEGE MUVATTUPUZHA

Congratulations

Elizabath Mathews
Vice Chairperson
College Union: 2022-23

Alumni Mentorship Program

The Department of Statistics has established a best practice for its final year M.Sc project by collaborating with alumni members who are working in the field of data science. This partnership has provided our students with the opportunity to work with real-world data sets, gaining valuable experience in handling true statistical problems. The support and expertise of our alumni members have contributed to the development of a comprehensive and innovative learning experience for our students.

MENTORS

Rakesh Poduval
Data Scientist , IMMO

Dr.Gijo EV
ISI, Bangalore

Dr. Jimson Mathew
IIT -Patna

Martin George
UNODC , Austria

Dr.Boby J
ISI, Bangalore

Rony John Thomas
SG Analytics, Bangalore

Bob Johns
Genpact, Australia

Niret K Kurian (ISS)
Ministry of Ayush

Littish Dominic
AstraZeneca

Ajithkumar P K
Eco & Stat, Govt.of Kerala

Cencymon Augustine
Genpact, Germany

Geena E
Denkformat GmbH,Berlin

Dr.Ginto Pottackal
PPD, Bangalore

Rajesh Viswanath
SG Analytics, Bangalore

Ashbin Jaison
UIB, Norway

Manoj V
AstraZeneca, Cambridge

Sreejith Vasudevan
Ernst & Young ,Cochin

Anton Augustine
OMV, Auckland

Dr.Thomas Xavier
ISI, Delhi

Joice John
Reserve Bank of India

EXPERT TALKS

The Department of Statistics organized a series of expert talks on the latest topics from data science and statistics. The hour-long program consisted of a 45-minute presentation and a 15-minute question-answer session. the expert talks organized by the Department of Statistics were informative and engaging. The topics covered the latest trends in data science and statistics and provided insights into their real-life applications. The question-answer sessions were interactive and allowed participants to clarify their doubts and learn from the experts. Overall, the talks were a valuable learning experience for the participants and contributed to the advancement of statistical knowledge.

Statistical Quality Control
-New Methods

Date : 24-06-2022
Time : 06.00 PM (IST)

Dr. Boya Venkatesu

Assistant Professor,
Woxsen University,
Hyderbad.

Green Crimes
-The Uncharted Threat

Date : 02-07-2022
Time : 06.00 PM (IST)

ABHIJITH SUNNY

National Forensic Sciences University
Gandhinagar.

EXPERT TALKS

PROF. JIMSON MATHEW
IIT- PATNA

DISCRIMINANT ANALYSIS APPROACH TO MEDICAL IMAGES CLASSIFICATION

Date : 16-06-2022
Time : 11.00 AM (IST)

DR.JISHA FRANCIS
Post Doctoral Fellow
IISER - Kolkata

STOCHASTIC ORDERINGS THEORY & APPLICATIONS

Date : 23-12-2022
Time : 10.30 AM (IST)

Jecko Augustine
Sr.Business Data Analyst
A1 Telecom, Vienna, Austria

Date : October 28, 2022
Time : 3.00 PM (IST)

'NO-CODE' MACHINE LEARNING FOR BUSINESS USERS

EXPERT TALKS

Prof. Jenna Guse
Cambrian College
Ontario, Canada.

ROLE OF R PROGRAMMING IN DATA SCIENCE

Date : October 27, 2022
Time : 9 AM (EST) / 7.30 PM (IST)

UNLOCKING THE POWER OF THE CLOUD: EXPLORING MICROSOFT AZURE

Date : January 05, 2023
Time : 2:30 PM (IST)

Nithin Mani
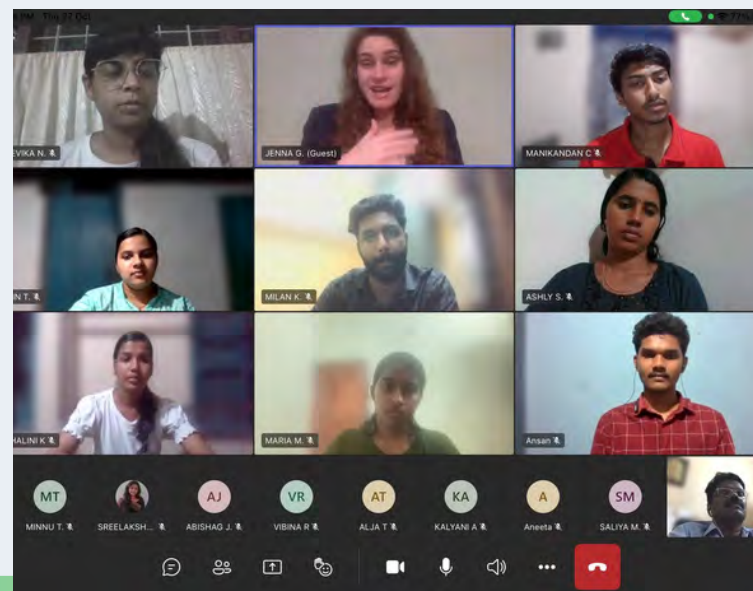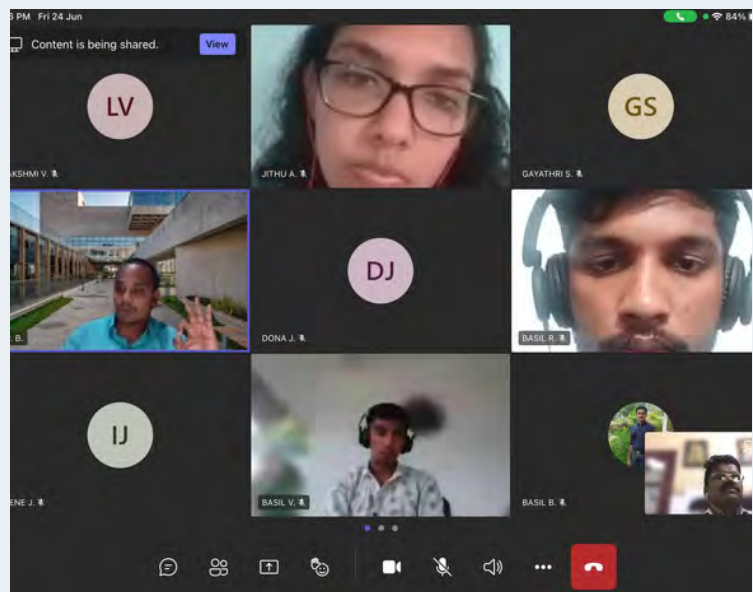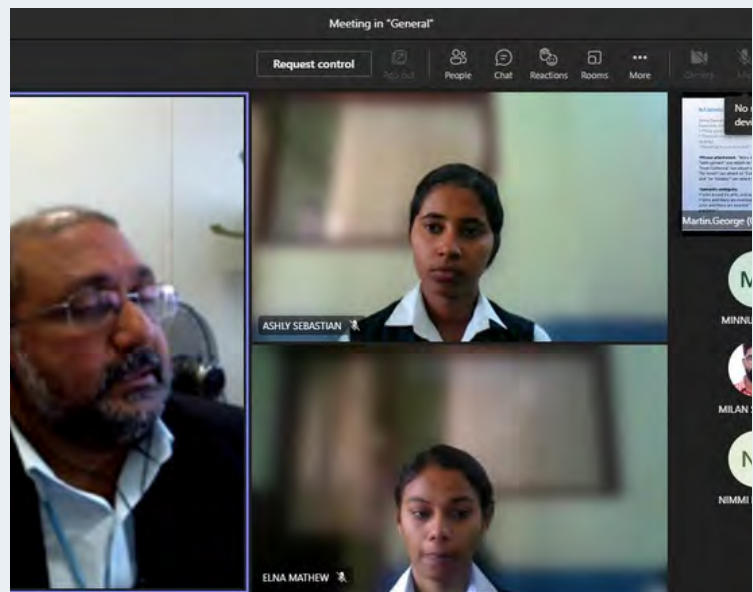Senior Data Scientist
PIT Solutions ,Ontario, Canada

Martin George
Data Scientist,United Nations
Vienna, Austria

INTRODUCTION TO NATURAL LANGUAGE PROCESSING

Date : January 05, 2023
Time : 2:30 PM (IST)

EXPERT TALKS

Alumni Lecture Series

COFFEE & CONVERSATION WITH ALUMNI !

The "**Coffee and Conversation with Alumni**" program is an exciting initiative organized by the Statistics Department to provide a platform for students to interact with alumni members. The program aims to facilitate conversations between current students and successful alumni members who have established themselves in various fields. These events are an excellent opportunity for students to ask questions and seek guidance from alumni members who have gone through similar experiences.

During the events, alumni members will share their stories of success, their career paths, and offer insights on how they navigated their way to top positions in their respective fields. These interactions will not only provide students with valuable advice but will also help them build connections with alumni members who can serve as mentors or advocates for future job opportunities.

Additionally, retired teachers are also invited to participate in these events, giving them an opportunity to share their experiences with the new generation. This program creates a positive and supportive community within the Statistics Department and fosters a sense of belonging among students and alumni members alike. This year department organized two events.

September 23, 2022 at 2.30 P.M

GOVERNMENT OF KERALA

P.K. Ajithkumar
Deputy Director,
Department of Economics & Statistics,
Government of Kerala.

Coffee & Conversation With Retired Teachers

Date: 21-12-2022
Time : 2.30PM-4.00PM

This program is designed to provide students with valuable insights and guidance from experienced educators who have dedicated their lives to the field of teaching Statistics. Through this program, students will have the chance to ask questions, seek advice, and learn from the wealth of knowledge and experience that retired teachers have to offer. Whether it's sharing stories about their teaching careers, offering tips for success in the classroom, or providing guidance on professional development, retired teachers have much to offer students who are just starting out in their own careers.

P.K. Ajithkumar interacting with students

Coffee & Conversation with Retired Teachers

INTERNSHIP
PROGRAMS

This year, Department of Statistics provided internship opportunities to students with the Department of Economics and Statistics and the Department of Animal Husbandry, Government of Kerala. We are proud to say that ten of our students are currently undertaking an internship with the Department of Economics and Statistics, while nine of our students are with the Department of Animal Husbandry.

Students are attending the training programs in the Kottayam and Ernakulam regional offices, where they are applying statistical techniques to real-world data sets. The internship program is designed to provide our students with hands-on experience and the opportunity to apply the statistical tools they have learned in a real-world setting. By working with actual data sets, students can gain valuable experience and develop the skills necessary to succeed in their future careers.

During the internship, students are using various statistical techniques and visualization tools to analyze the data. This practical experience will enable them to gain a deeper understanding of the concepts they have learned in the classroom and develop a stronger grasp of statistical analysis.

We believe that this internship program will provide students with an invaluable opportunity to enhance their skills and gain practical experience in the field of statistics.

"An internship in Statistics is not just an opportunity to gain practical skills, it's a chance to become a part of a rapidly growing field that is essential in shaping our world."

Department of Economics & Statistics

- Basil Mathew
- Yadhukrishna R
- Ajila Abbas
- Akhila Johnson
- Aneetta Joy
- Anumol Sukumaran
- Gayathri Suresh
- Jithu Rose Abraham
- Aneetta P Benny
- Nimmi Benny

Department of Animal Husbanday

- Basil Regy
- Basil Varkey
- Rohith A Shivarajan
- Ashily Benny
- Delsa Jose
- Dona Jose
- Elizabath Mathews
- Nikitha Mathew
- Jyothis Mariya A J

"An internship in Animal Husbandry Department for Statistics students is a unique opportunity to combine the power of numbers with the wonders of nature"

Survey on

Major Livestock Products

in Avoly Grama Panchayat

in association with

Department of Animal Husbandry, Government of Kerala.

A census survey was conducted in association with the Department of Animal Husbandry, Government of Kerala, to identify the major livestock products in Avoly Panchayat ward 11. The survey was carried out by M.Sc students who gained practical experience in conducting surveys. The objective of the survey was to collect data on the livestock products in the area and to identify the most commonly raised animals in the region.

The survey was conducted by visiting 431 homes in Avoly Panchayat ward 11. A questionnaire was prepared in consultation with the Department of Animal Husbandry, which included questions on the types of livestock products and the number of animals raised by the households. The survey team visited each house and interviewed the residents, who provided information on the types and quantities of livestock products that they raised.

The survey methodology provided the M.Sc students with practical experience in conducting surveys and collecting data, which will be useful in their future careers.

Survey on
Major Livestock Products

Students with the officers of the Department of Animal Husbandry after the training program on the survey.

The census survey conducted by the M.Sc Statistics students in association with the Department of Animal Husbandry, Government of Kerala, provides valuable insights into the major livestock products in Avoly Panchayat ward 11. The findings of the survey can be used to develop policies and strategies to promote the growth and development of the livestock industry in the area.
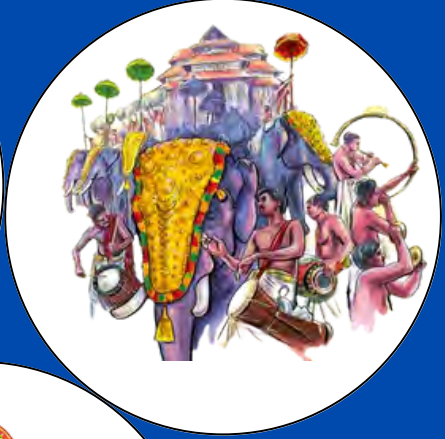
Mega Exhibition

എന്റെ കേരളം – 2023

Marine Drive, Cochin

The Government of Kerala has organized an exhibition named "Ente Keralam" at Marine Drive in Ernakulam. This exhibition aims to showcase the unique features of Kerala, including its culture, history, and natural beauty. As part of the exhibition, the MSc Statistics students from Nirmala College, in association with the Department of Economics and Statistics, have set up a stall to highlight some of the most interesting aspects of Kerala.

The stall set up by the MSc Statistics students is one of the most engaging stalls at the exhibition. The students have put together a range of content, including videos, quizzes, and games, to attract and educate visitors to the exhibition. They have created an interactive and informative space where visitors can learn about Kerala's history, culture, and heritage.The videos are very engaging and informative and help visitors understand the unique aspects of Kerala. The quizzes and games set up at the stall are also very interesting and interactive, making learning about Kerala's culture and heritage more fun.

The students have also put up charts and posters highlighting Kerala's achievements in various fields, including education, health, and social development. They have also displayed charts depicting the state's economic growth over the years. These displays provide visitors with a glimpse of the progress Kerala has made in various fields and its potential for growth in the future.

Stalls arranged by students of the first year MSc Statistics in Marine Drive for the exhibition "Ente Keralam".

INVITED
TALKS by *faculty members*

The field of data science is rapidly evolving, with new tools and techniques emerging constantly to help us better understand and analyze complex data sets. To stay up-to-date with these advancements, it is essential for scholars and researchers to attend talks and training sessions led by experts in the field. The Department of Statistics is one such institution, whose faculty members are at the forefront of the latest tools and techniques in data science. These faculty members regularly deliver talks and training sessions to other institutions, sharing their knowledge and expertise with scholars and researchers around the world. Through these talks, attendees can gain insights into the latest trends in data science, and learn how to apply cutting-edge tools and techniques to their own research.

RCSS -KOCHI
19-11-2022

KVASU-TRISSUR
14-10-2022

CMS-KOTTAYAM
30-10-2022

SSC-KALADY
26-02-2023

Department of Statistics

Certificate Courses

2022-23

- Applied Survival Analysis
- GRUEZI-German Course
- Google Data Studio
- Wolfram Cloud
- MATLAB/OCTAVE
- R/PYTHON
- Power BI

Power BI

About the program

The Department of Statistics is pleased to offer a range of certificate courses for the academic year 2022-23. These courses have been designed to provide students with practical skills and knowledge that will help them to succeed in their academic and professional careers. This year, the department offered four certificate courses that cover a wide range of topics. The first course, "Applied survival analysis," was taught by Dr. Ginto Pottakal, Principal Statistical Scientist at PPD. This course focused on the application of survival analysis techniques in real-world scenarios.

In addition, the department also offered a short-term course in German, called "GRUEZI," taught by Sunu George Varghese. This course was designed to help students develop basic communication skills in German, which can be useful for those planning to study or work in German-speaking countries.

Furthermore, the department provided training in three different software programs - Wolfram Mathematica, MATLAB, Pythin, and Google Sheets. These courses helped students to develop their technical skills and provided hands-on experience in using these powerful tools. Students also completed many mini-projects based on the skills they gained and participated in skill-sharing programs to share their newfound knowledge with their peers.

Overall, these certificate courses provided students with a unique opportunity to learn new skills and gain practical experience in the field of statistics. The department is committed to providing high-quality education and training to its students, and these courses are just one of the ways in which it achieves this goal.

"GRUEZI"
A SHORT-TERM COURSE IN GERMAN

HERZLICH WILKOMMEN !!!
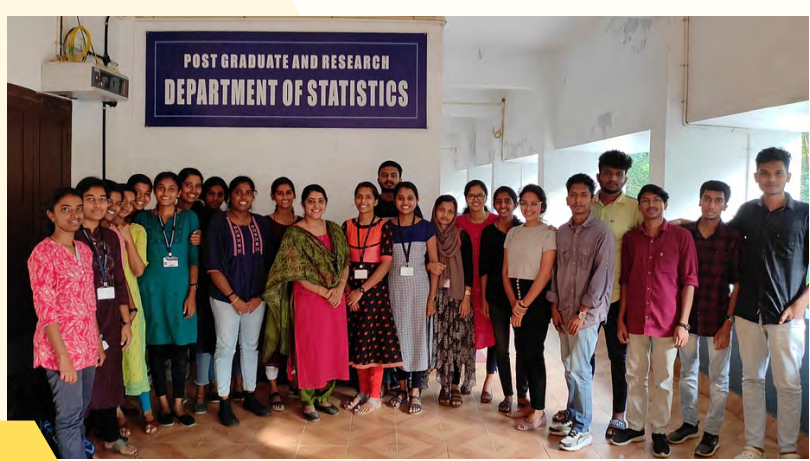
Topics to be Addressed:
- Greetings and self-introduction
- Alpha-Numerals
- Common words and phrases in day-to-day life
- Basic Grammar

Course Outcome :
Participants must be able to understand and speak basic German.

Instructor
Sunu George Varghese
Foreign Language Division, VJCET, Vazhakulam.

POST GRADUATE AND RESEARCH
DEPARTMENT OF STATISTICS

Department of Statistics
Nirmala College Muvattupuzha

CERTIFICATE
OF COMPLETION
THIS IS TO CERTIFY THAT

ANANDHU KRISHNAN

Completed the "GRÜEZI"-Short term Course in German conducted by the Department of Statistics, Nirmala College Muvattupuzha.
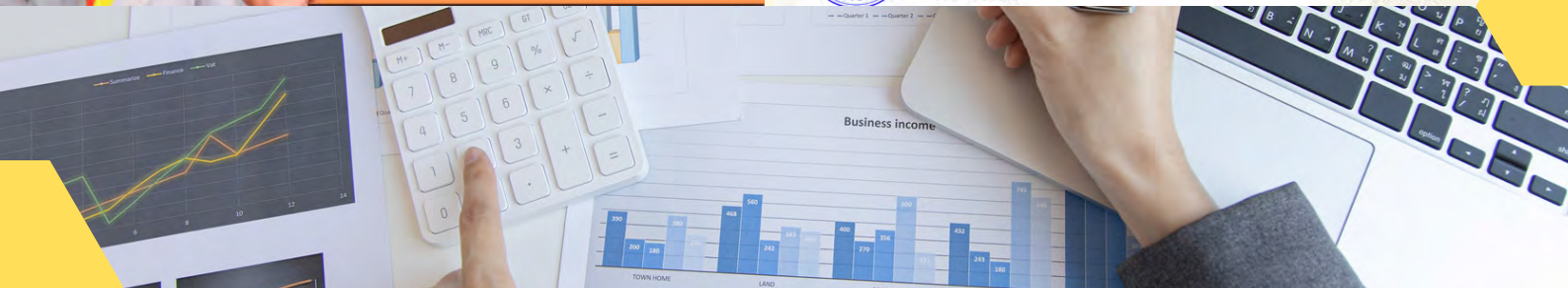
Date of issue : 17-12-2022

686 661

DR.T.M.JACOB
HoD–Statistics

SUNU GEORGE VARGHESE
Course Instructor

Business income

Certificate Course
APPLIED SURVIVAL ANALYSIS

This certificate course covers the fundamental concepts and methods of survival analysis, graphical representation, analysis of time-to-event data, methods of handling censoring data, Cox proportional hazard models and their extensions. Data analysis and assignments will be performed using R software.

Course Objectives

This course aims to provide hands-on experience in analyzing clinical and epidemiological datasets and derive meaningful interpretations from the analysis results.

Course Outline

- Introduction to Survival Analysis
- Understanding Censored Data
- Survival and hazard functions
- The Kaplan-Meier Estimator
- Log Rank and related tests.
- Cox Proportional Hazards

Inauguration on 30-08-2022 at 10.00 am

Dr. Ginto Pottackal completed his M.Sc in Statistics from Nirmala College and M.Phil from Bharathidasan University. He also possesses MS in Statistics from Maryland University and completed Ph.D. in the topic *"Some Tests, Confidence Limits and Tolerance Limits for Assessing Biosimilarity"* from the same university. He has many years of experience in academic and medical research and completed many research projects for Food and Drug Administration (FDA-USA). Currently, he is serving as the Principal Statistical Scientist at PPD Bangalore.

Dr.Ginto Pottackal
Principal Statistical Scientist - PPD

Department of Statistics
Nirmala College Muvattupuzha

CERTIFICATE
OF COMPLETION
THIS IS TO CERTIFY THAT

Nimmi Benny

Completed the short-term course " **Applied Survival Analysis**" conducted by the Department of Statistics, Nirmala College Muvattupuzha.

DR.T.M.JACOB
HoD-Statistics

686 661

DR.GINTO POTTACKAL
Course Instructor

Date of Issue : 15-12-2022

Skill Development Programs

Wolfram Cloud

The Wolfram Cloud is a powerful cloud computing platform that offers a suite of tools and services for data analysis, visualization, and computation. The platform enables users to perform symbolic calculations, create simulations, and extract live data, among other capabilities. The certificate course in Wolfram Cloud is designed specifically for MSc students who want to enhance their skills in these areas. The 36-hour training sessions provide a comprehensive introduction to the platform and cover a wide range of topics, including data analysis, visualization, and computation. By the end of the course, students will have a solid understanding of how to use the Wolfram Cloud to perform complex calculations, create simulations, and extract and analyze live data, all of which are essential skills in many fields of study.

MATLAB /OCTAVE

MATLAB/OCTAVE is a powerful tool that has become increasingly important in scientific and engineering research. Its versatility and user-friendly interface make it a popular choice for a wide range of applications, including simulations, data analysis, and image processing. For MSc students, proficiency in MATLAB/OCTAVE is essential for success in their field of study. That's why a certificate course in MATLAB/OCTAVE has been designed specifically for MSc students, to equip them with the necessary skills to use this tool effectively. This 30-hour training program is designed to cover the key aspects of MATLAB/OCTAVE, including simulations and image processing, and is taught by experts in the field. Upon completion of this course, MSc students will be equipped with the skills and knowledge to apply MATLAB/OCTAVE to their research, making them more competitive in their field.

Power BI /Tableau

Power BI and Tableau are two of the most popular and widely used business intelligence and data visualization tools in the industry today. As such, many MSc students who are pursuing a degree in a related field may find it beneficial to gain a thorough understanding of these tools and how to use them effectively.

The 25-hour training program in Power BI and Tableau has been specifically designed to meet the needs of MSc students who want to enhance their knowledge and skills in data visualization techniques. The program includes a combination of theory and hands-on training, giving students the opportunity to gain practical experience with these powerful tools.

Skill Development Programs

Google Sheet

Google Sheets is a powerful spreadsheet software that can be used for a variety of purposes, from basic data management to advanced data analysis. For MSc students looking to develop their skills in data analysis and management, a training program in Google Sheets can be an excellent way to gain practical experience in these areas. This 25-hour training program is designed to provide students with hands-on training in data analysis and live data extraction from different data repositories.

The training sessions will cover a range of topics, including how to use Google Sheets to organize, manipulate, and analyze data, as well as how to extract live data from various data repositories. Students will learn how to create and customize charts and graphs, how to use functions and formulas to manipulate data, and how to collaborate with others on a shared Google Sheets document.
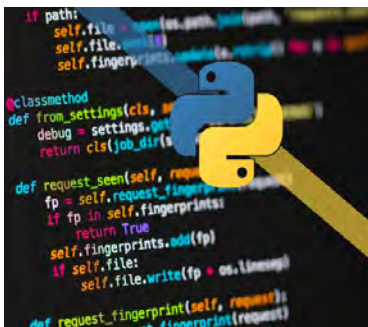

Python

Python is a versatile programming language that has become increasingly popular in the data science and machine learning fields. As a result, it has become an essential tool for students pursuing a Master's degree in various fields, including computer science, data science, and other related fields.

The 36-hour training program in Python programming for MSc students is designed to provide a comprehensive introduction to Python programming. This program includes hands-on training sessions, where students will learn how to use Python to develop various applications and solve real-world problems.

In addition to the hands-on training, students who enroll in this program have completed various Massive Open Online Courses (MOOCs) from reputable platforms such as edX, DataCamp, and DataQuest. These MOOCs provide a solid foundation in Python programming and data science concepts, which students will build upon during the training program.
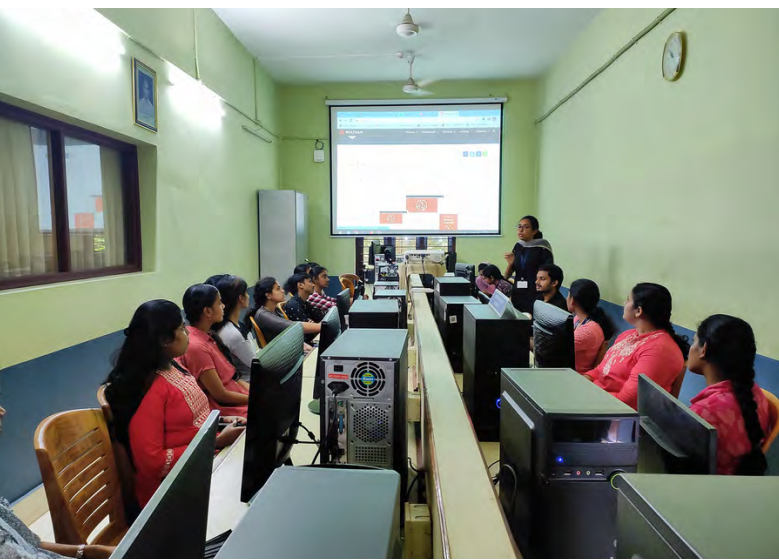
Industry-Academia Collaboration - 2023

Ninety hours training programme on

- Drug Discovery & Development
- SAS Programming
- CDISC SDTM
- CDISC AdaM
- TLF Report Generation
- Advanced Biostatistics using SAS

Prasanth V P
Associate Director
Business Solutions-IQVIA

IQVIA™

Date: January 16, 2023 | Time: 2:00 PM

" When academia and industry come together, they create a powerful force of intellectual curiosity and practical expertise that can solve complex problems and drive progress".

Academic Collaboration

Academic collaboration between institutions plays a crucial role in fostering knowledge transfer, capacity building, and skill development. In this regard, the Department of Statistics at Nirmala College signed a **Memorandum of Understanding** (MoU) with the **Kwame Nkrumah University of Science and Technology (KNUST)**, in Ghana last year. As part of this collaboration, the Department of Statistics is offering a training program in Wolfram Cloud, R programming, and Python. This training program aims to equip students with the necessary skills and knowledge to excel in their academic and professional pursuits. This year, 147 students have enrolled in the training program, which consists of two-hour training sessions on three days in a week. The collaboration between Nirmala College and KNUST is a testament to the importance of international academic partnerships in promoting knowledge exchange and global learning.

The 7th African International Conference (AIC) on Statistics
Advanced Statistics and Data Science in Africa
June 12 – 16, 2023, Marrakesh, Morocco

جامعة القاضي عياض UNIVERSITÉ CADI AYYAD   **UMBC** AN HONORS UNIVERSITY   University of Windsor

The American Statistical Association (ASA) has extended an invitation to the upcoming pre-conference workshop at the 7th African International Conference (AIC) on Statistics, which will be held in Marrakesh, Morocco, from June 12 to 16, 2023. This invitation comes at a time when more universities in Africa are expressing interest in academic collaboration with the Department of Statistics at Nirmala College. **Dr. T.M. Jacob** and **Dr. Ginto Pottakkal** will be attending the conference to engage in discussions on potential academic collaborations with their counterparts from various African universities. This presents an exciting opportunity for Nirmala College to expand its academic reach and establish partnerships with institutions in Africa, ultimately leading to the development of new statistical methodologies and the advancement of the field as a whole.

Keynote and Invited Speakers

Prof. Anindya Roy *(Department of Math and Statistics, University of Maryland Baltimore County, USA)*

Dr. Abera Wouhib *(National Institutes of Health, USA)*

Prof. Bimal Sinha *(Department of Math and Statistics, University of Maryland Baltimore County, USA)*

Prof. Carlos Coelho *(Department of Mathematics, New University of Lisbon, Portugal)*

Prof. Demissie Alemayehu *(Department of Statistics, Columbia University, USA)*

Prof. Derek Young *(Department of Statistics, University of Kentucky, USA)*

Prof. Ding-Geng Chen *(College of Health Solutions, Executive Director, Arizona State University, USA)*

Prof. Dulal Bhaumik *(Division of Epidemiology and Biostatistics, Univ of Illinois at Chicago, USA)*

Prof. Ejaz Ahmed *(Dean, Faculty of Math and Science, Brock University, Canada)*

Prof. Frank Konietschke *(Institute of Biometry & Clinical Epidemiology, Germany)*

Dr. Ginto J Pottackal *(Principal Statistical Scientist, Kerala, India)*

Prof. Gideon Zamba *(Department of Biostatistics, University of Iowa, USA)*

Prof. Jeffrey Wilson *(Assoc Dean & Professor, Department of Economics, Arizona State University, USA)*

Prof. Joyee Ghosh *(Department of Statistics and Actuarial Science, University of Iowa, USA)*

Prof. Ping Ma *(Department of Statistics, University of Georgia, USA)*

Prof. K. Krishnamoorthy *(Department of Mathematics, University of Louisiana at Lafayette, USA)*

Prof. Karabi Nandy *(School of Public Health, University of North Texas Health Science Center, USA)*

Prof. Kai Wang *(Department of Biostatistics, University of Iowa, USA)*

Dr. Malick Mbdoj *(Department of Statistics, Bowie State University, USA)*

Prof. Nabendu Pal *(Department of Mathematics, University of Louisiana at Lafayette, USA)*

Prof. Nagaraj Neerchal *(Department of Math & Statistics, University of Maryland Baltimore County, USA)*

Prof. Rajesh Nandy *(School of Public Health, University of North Texas Health Science Center, USA)*

Dr. Ronald L. Wasserstein *(Executive Director, American Statistical Association , USA)*

Prof. Srijan Sengupta *(Department of Statistics, North Carolina State University, USA)*

Prof. Solomon W. Harrar *(Department of Statistics, University of Kentucky, USA)*

Prof. T. M. Jacob *(Department of Statistics, Nirmala College Muvattupuzha, India)*

Prof. Thomas Mathew *(Department of Math and Statistics, University of Maryland Baltimore County, USA)*

Prof. Thu Nguyen *(Department of Math and Statistics, University of Maryland Baltimore County, USA)*

Prof. Yehenew Kifle *(Department of Math and Statistics, University of Maryland Baltimore County, USA)*

Prof. Yi Haung *(Department of Math & Statistics, University of Maryland Baltimore County, USA)*
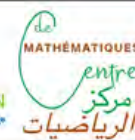
MASSIVE OPEN ONLINE COURSES

MOOC, or Massive Open Online Courses, are online learning platforms that offer courses on a wide range of topics, often taught by expert instructors from leading universities or companies. MOOCs provide a flexible, accessible, and often affordable way for students to learn new skills or pursue new interests from anywhere in the world with an internet connection.

The Department of Statistics, recognizing the potential of MOOCs, has provided access to six popular platforms to both students and teachers. Through these platforms, they have completed an impressive 243 courses on topics related to Data Science, Python, R program, Power BI, Tableau, Natural Language Processing, and many more. The department's utilization of MOOCs is a testament to their commitment to providing their students with the latest and most relevant knowledge and skills in their field.

MASSIVE OPEN ONLINE COURSES

The world of education has seen a significant shift towards digital learning in recent years, with Massive Open Online Courses (MOOCs) being at the forefront of this transformation. As technology continues to advance and internet access becomes more widespread, online learning platforms are increasingly becoming an attractive option for students seeking to supplement their academic pursuits. This is especially true for MSc Statistics students, who are often encouraged to take online courses that align with their program's syllabus. MOOCs offer a flexible and accessible way to learn from world-class experts in statistics, as well as to gain practical skills and knowledge in related fields such as data science and programming. By taking advantage of these opportunities, MSc Statistics students can enrich their learning experience and acquire the tools they need to succeed in today's data-driven world.

First Year Students

As part of an induction program, students have completed a range of edX courses, with the primary goal of introducing them to the diverse range of courses available on MOOC platforms. These courses cover a wide range of topics, from computer science and data analysis to business and language learning. The flexibility of online learning makes it possible for learners to access courses at their own pace and from anywhere in the world, providing opportunities for lifelong learning and career development.

Second Year Students

With the ever-increasing demand for Machine Learning professionals in various industries, such as finance, healthcare, and e-commerce, this program aimed to equip students with the necessary skills to excel in this field. By the end of the program, students gained hands-on experience working with real-world data sets and were able to build and deploy predictive models using Python.

SUMMER INTERNSHIP PROGRAMME

HINDCASTING AND FEATURE SELECTION OF OCEAN WAVES

About the Programme

Hindcasting of ocean waves is a complex process that requires advanced statistical tools and techniques. There are several statistical methods used for hindcasting ocean waves, including time series analysis, LSTM (Long Short-Term Memory) modeling, and machine learning algorithms.

The internship program provides a unique opportunity for first year M.Sc Statistics students to gain hands-on experience in the field of ocean wave hindcasting. The internship focuses on the hindcasting of ocean waves in the sea route from **Tokyo-Japan** to **Rostock-Germany** (13883 nm), which is a crucial route for international shipping. The goal of the internship is to provide students with practical experience in statistical modeling, data analysis, and programming, as well as exposure to the latest technologies in the field. This internship program is offered by **Admaren Tech** Private Limited, Info Park, Cochin.
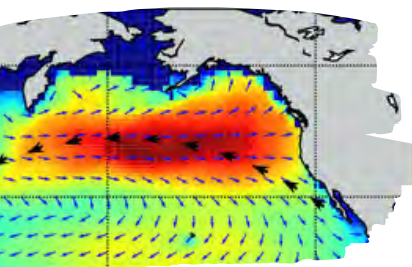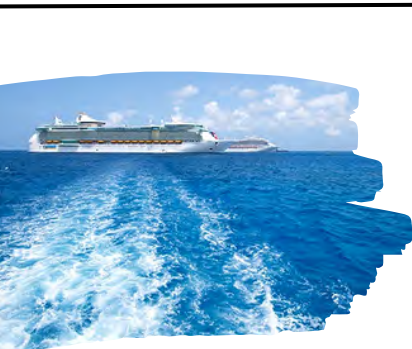
Innovative Teaching Practices

"Games are the most elevated form of investigation." - Albert Einstein

Teaching statistics has been a challenging task for many educators due to its abstract nature. To make learning statistics more effective and engaging, innovative teaching practices have been adopted by teachers of department of Statistics. This report explores some of these innovative practices, including gamification, outdoor classroom, helicopter experiment, Kahoot quizzes, QR codes in question papers, Chernoff faces, survey sampling techniques using VRS, and skill-sharing programs.

Scan for the answers

Designing Helicopter Experiment for DoE

Demonstration of survey sampling techniques using VRS

Outdoor Classroom

The Department of Statistics has organized many outdoor class sessions for M.Sc students to provide them with a unique learning experience. The sessions aims to expose students to the benefits of learning in an outdoor environment and help them build a personal relationship with the alumni members. The event will include invited talks by alumni members, who will share their experiences and insights on the subject matter.

Learning in an outdoor classroom environment can provide students with many benefits that they may not experience in an indoor setting. Firstly, being in nature can improve cognitive function and increase creativity, helping students to think outside the box and come up with innovative solutions to problems. Secondly, it can reduce stress and anxiety, creating a more relaxed and enjoyable learning experience. Finally, it can enhance physical activity, promoting healthy living and reducing the risk of sedentary lifestyles.

The invited talks by the alumni members will provide an opportunity for the students to learn from the experiences and insights of those who have already entered the workforce. This will help students to understand the practical applications of the concepts they are learning and gain a better understanding of the industry they will be working in. Moreover, the open area setting will make it easier for the students to ask questions and build personal relationships with the alumni members.
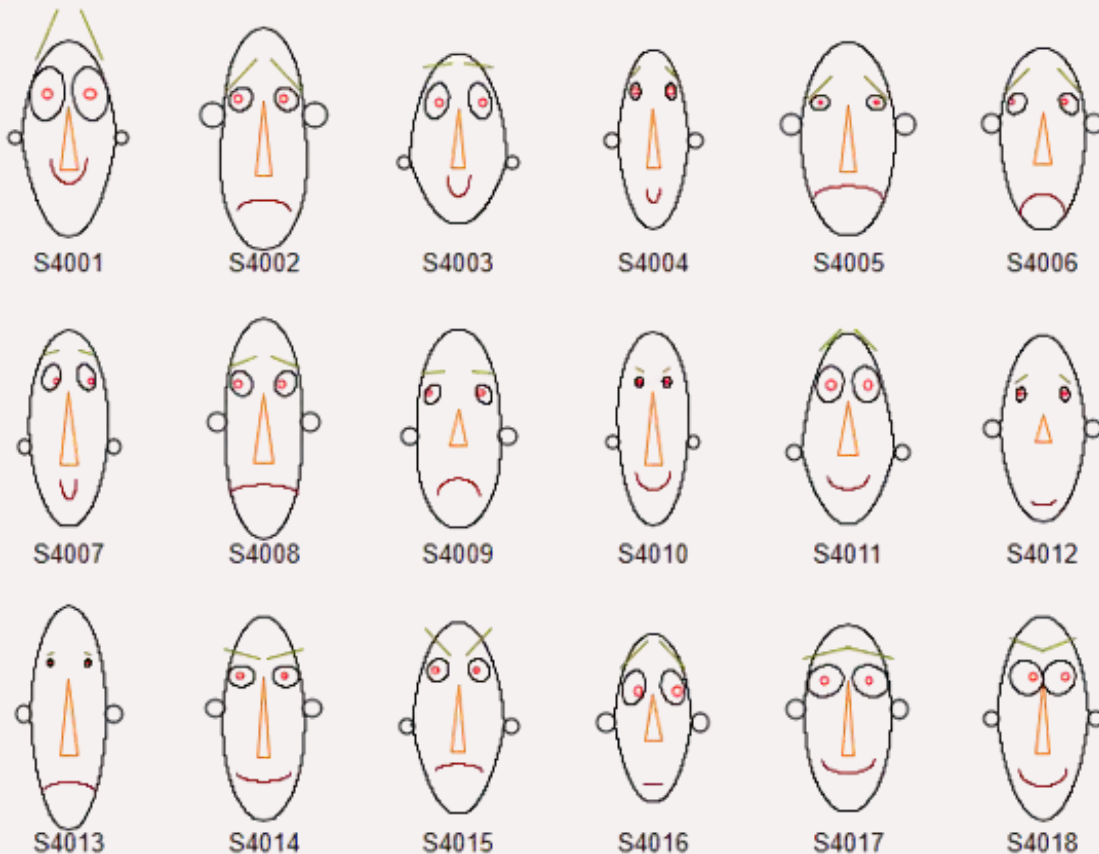
Chernoff Faces

PERSONALITY TRAITS

Chernoff faces are a graphical representation of multivariate data that use facial features to illustrate different variables.It was developed by Herman Chernoff to represent multivariate data, ostensibly effectively representing up to 20 variables. Facial features(eyes, nose, eyebrows) are mapped to multiple variables, with size, orientation, shape, color, and placement potentially representing different attributes of a single observation.This innovative teaching practice can be an effective way to introduce students to complex data sets and statistical analysis.

A survey is carried out among students to collect the score of personality characteristics of their classmates. The average score of these twenty personality characteristics of students are used here for visualization.

S4001 S4002 S4003 S4004 S4005 S4006

S4007 S4008 S4009 S4010 S4011 S4012

S4013 S4014 S4015 S4016 S4017 S4018

face/w = Adaptable
ear/lev = Affectionate
halfface/h = Amusing
upface/ecc = Broad-minded
loface/ecc = Compassionate
nose/l = Communicative
mouth/cent = Creative
mouth/curv = Dynamic
mouth/l = Friendly
eyes/h = Hard-working

eyes/sep = Honest
eyes/slant = Humorous
eyes/ecc = Intelligent
eyes/l = Optimistic
pupils/pos = Pro-active
eyebrows/h = Self-disciplined
eyebrows/ang = Straightforward
eyebrows/l = Understanding
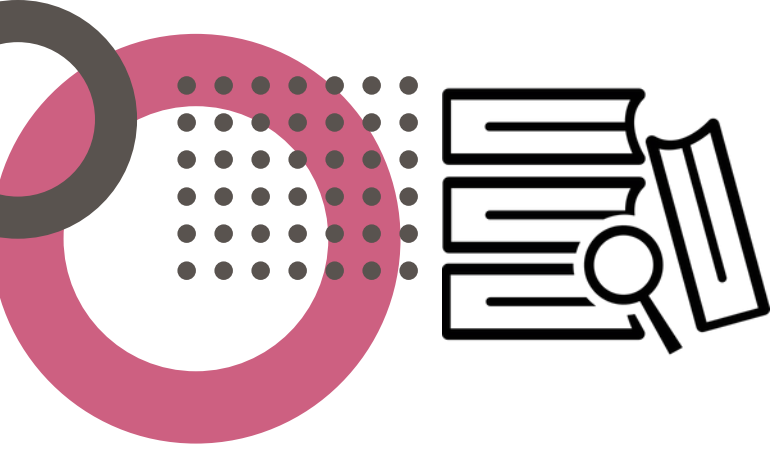ear/r = Warmhearted
nose/w = Rational
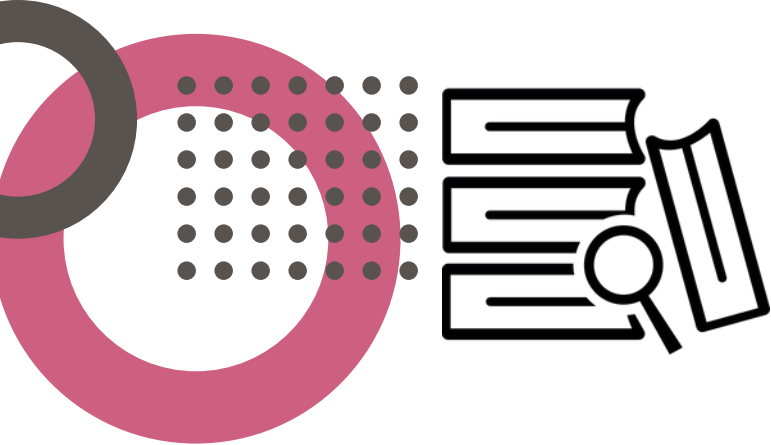
RESEARCH AND CONSULTANCY BY STUDENTS

BASIL MATHEW BIJU

- Assisted pharmacy students from Nirmala College in their project on Antibiotic Sensitivity Patterns and Bacterial Analysis.
- Provided assistance to an M.Sc. Zoology student on her project focused on Insect Pollinators visiting Male and Female Inflorescence of Musa acuminata.
- Offered guidance to an M.A. Economics student on her project titled A Study on Skill Development Programmes and its Impact on Employment Generation.
- Advised a M.Sc. Psychology student from TRADA Institute of Social Sciences on her project titled Life Satisfaction among working & non-working women.
- Assisted Civil Engineering students from MA College in their project on 'Analysis on Interdependence of Weather Parameters' using SPSS Software.

JITHU ROSE ABRAHAM

- Assisted pharmacy students from Nirmala College in their project on Antibiotic Sensitivity Patterns and Bacterial Analysis.
- Offered guidance to B. Sc. Statistics students of Mar Athanasius College Kothamangalam on their final project on Analysis of water quality data.
- Supported Postgraduate dental student of Govt. Dental College Trivandrum in her Research project on Shear Bond Strength of a new Orthodontic Adhesive.
- Supported M. Com student in the completion of her project titled Corporate Social Responsibility- An Analytical Study on Top rated Multinational Companies.
- Helped the student of Rajiv Gandhi Institute of Technology Kottayam in her seminar presentation on Street Level Crime Patterns and Analysis.

BASIL REGY

- Assisted pharmacy students from Nirmala College in their project on Antibiotic Sensitivity Patterns and Bacterial Analysis.
- Offered guidance to final year B.Sc. Statistics students of Mar Athanasius College (Autonomous) Kothamangalam in their project : A Study on Vital Rates and Land Utilisation, Statistics of Kerala.

ANEETTA JOY

- Supported M.Com student in completion of her final year project: A study on the work life of teachers during COVID 19 and their coping strategies with special reference to Manjalloor Grama Panchayat.
- Offered guidance to final year B.Sc. Statistics students of Mar Athanasius College (Autonomous) Kothamangalam in their project : A Study on Vital Rates and Land Utilisation , Statistics of Kerala.

RESEARCH PUBLICATIONS BY STUDENTS

Basil Mathew Biju

- **Analysis On Interdependence of Weather Parameters Using SPPS Software.** International Research Journal of Engineering and Technology (IRJET), Volume: 09 Issue: 06 , June 2022.

Basil Mathew Biju, Rohith A Sivarajan & Gayathri Suresh

- **Time Series Analysis on Global CO_2 Emission, Proceedings of International Time Series Modeling Competition. [ITMC – 2023].**

Student Synergy Program

**A project mentoring program with students of
St. Joseph College Devagiri, Kozhikode.**

Mentoring projects are an excellent way for students to apply their academic learning to real-world problems and gain practical experience in their field of study. At **St Joseph College Devagiri, Kozhikode**, BSc Mathematics students have the opportunity to participate in a unique mentoring project. In collaboration with first-year MSc Statistics students from Nirmala College, these BSc Mathematics students are exploring the field of image processing using the software tools Octave , MATLAB and Mathematica.

As part of their final year projects, the BSc Mathematics students are analyzing signatures of popular personalities, face images, and images of leaves. With the guidance and support of the MSc Statistics students, these students are applying mathematical and statistical techniques to analyze, interpret, and visualize these images. This collaboration between students from different institutions and different levels of study fosters a collaborative learning environment, where both sets of students can learn from each other and develop a range of skills, including communication, teamwork, and problem-solving. Overall, this mentoring project offers a valuable opportunity for BSc Mathematics students to gain hands-on experience in image processing and to develop critical thinking and analytical skills that will serve them well in their future academic and professional endeavors.
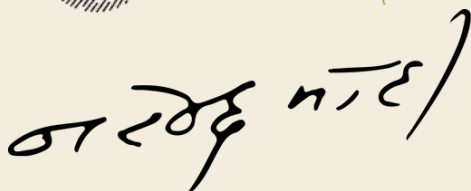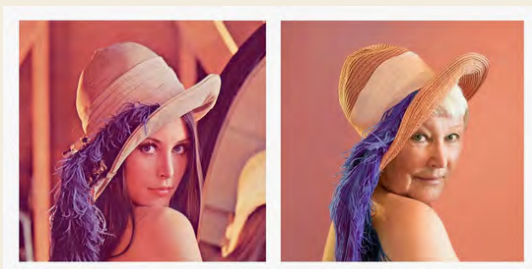
Topics Covered

- Image compression using Singular Value Decomposition (SVD)
- Image enhancement using Principal Component Analysis (PCA)
- Image segmentation using Graph Cut Algorithm
- Image restoration using Matrix Inversion Technique
- Face recognition using Eigenfaces
- Image registration using Affine Transformations
- Object recognition using Haar Wavelets
- Image denoising using Total Variation (TV) minimization
- Image colorization using Matrix Factorization
- Image inpainting using Convex Optimization

Collaborative Project

CLIMATE CHANGE

w i t h
S t u d e n t s   o f   M S c   S t a t i s t i c s
R a j a g i r i   C o l l e g e   o f   S o c i a l
S c i e n c e s ,   K o c h i .

The project analyzes the change in the distribution of various parameters that influence climate, such as temperature, wind, humidity, clouds, and precipitation. The study takes data from 4632 cities in 181 countries that stretch around the globe. This comprehensive analysis is based on daily time series data from the years 1960 to 2022, extracted from Wolfram Data Repository. The study has provided valuable insights into the impact of these parameters on climate change. The results of this study can be used to inform policy decisions and strategies aimed at mitigating the effects of climate change.

"We have a single mission: to protect and hand on the planet to the next generation."-Francois Hollande

Apps Developed

for

Data Management

WEB SCAPPING ENGINE FOR RESULT ANALYSIS

Department developed one web scrapping engine for result analysis with the support of alumni, **Mr. Sreejith Vasudevan**, Assistant Manager at EY to extract the marks of students from the MG University website. This is a web scraping application developed using Python, Selenium, and Tkinter. This application allows users to extract data from websites by automating the process of navigating through web pages, filling out register number, and extracting mark list details .

SMARTBALLOT

The ballot paper developing app for college union elections is a valuable tool for simplifying the election process. With this app, generating ballot papers for elections becomes quick, easy, and efficient. All you need to do is input the names of the candidates, and the app automatically verifies their eligibility and generates the ballot paper with a few clicks.

This app can significantly reduce the time and effort required for creating ballot papers for college union elections. It eliminates the need for manual verification of candidate eligibility and ballot paper creation, which can be a tedious and error-prone process.

SREEJITH VASUDEVAN
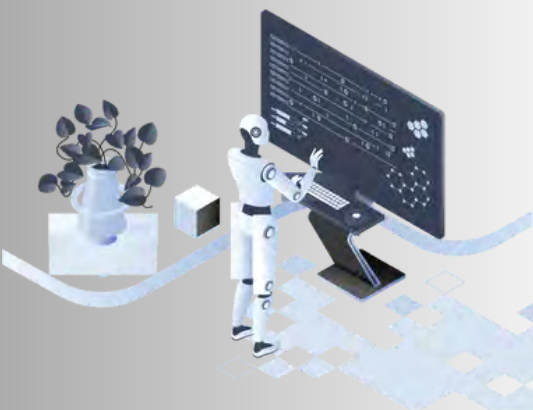
RESULT ANALYSIS

This report presents the findings of a simple statistical study conducted on the results of 6000 students from **178** colleges and **107** courses. The data was collected using a web scraping application and **37733** observations were collected using a systematic sampling procedure. The aim of the study was to get some insights into the distribution of internal and external examination marks.

The distribution of internal marks was found to be highly **negatively skewed**. This suggests that there may be some grade inflation taking place, as more students are receiving higher marks than they would have in the past. This may be due to a variety of factors, such as lower academic standards or pressure to improve student retention and graduation rates.

On the other hand, the distribution of external examination marks was found to be uniformly distributed with a **mark inflation effect** in the interval 20-30. This means that a larger proportion of students received higher grades than would be expected based on their actual performance. This may be due to factors such as lower academic standards, a desire to boost student retention and graduation rates, or pressure from students or parents to receive higher grades.
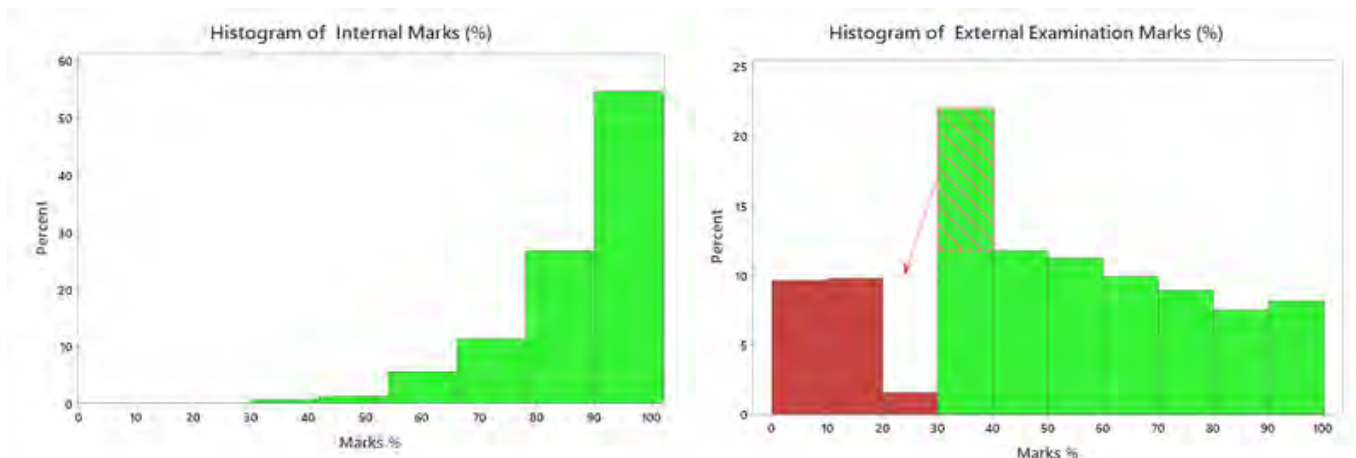
The findings of this study have important implications for students, faculty, and institutions. For students, the skewness in the distribution of internal marks may impact their ability to differentiate themselves from their peers or compete for jobs or further education opportunities. The grade inflation effect in the distribution of external examination marks may also devalue the worth of their degrees or result in a sense of entitlement that can hinder their future performance.

P(Failure in internal exam) =**0.002**

P(Failure in external exam) =**0.367**

P(Failure in external exam **|** Internal Marks > 90 %) =**0.1923**

Correlation between internal and external exam marks =**0.389**

STATS CLUB
Explore the World of Statistics

STATS CLUB
Explore the world of Statistics

Stats Club is an organization that has been established to provide students with an interest in Statistics, a community to foster their skills and career development. As part of the Department of Statistics, the Stats Club has been able to host various events throughout the year that have provided students with valuable learning opportunities, social connections, and a platform to showcase their skills.

Stats Club has been at the forefront of organizing events that cater to the diverse interests and needs of its members. The club has hosted various types of events that include career development events, skills development events, social events, and datathons. These events have been well-received and have provided an opportunity for students to network with professionals in the field, acquire new skills, and enhance their knowledge of Statistics.

In this annual report, we will highlight the achievements of Stats Club in the past year and showcase the impact of the events on the members. The report will provide a comprehensive overview of the events that were hosted and their impact on the student community.

Induction Programme

The induction program for First Year MSc Statistics students **(ARAMBIKALAMA)** is a vital part of their journey into the Department of Statistics. This program is designed to familiarize students with the department's environment and introduce them to various courses, student activities, and opportunities available to them during their time at Nirmala College.

The induction program provides a comprehensive overview of the academic expectations and resources available to students. Students will have the opportunity to interact with leading data scientists, who will share their experiences and insights on the industry. This interaction will not only provide an opportunity to learn from experts but also inspire students to pursue their academic and professional goals.

The program is tailored to meet the specific needs of new students and will take them through a typical life at the department, including an overview of the courses offered, academic regulations, and student support services. This program is an excellent opportunity for students to familiarize themselves with the department, establish new relationships, and prepare for their academic journey ahead.

01
SEPTEMBER
2022

FRESHERS DAY

Nirmala College, Muvattupuzha

ARAMBIKALAMA

Department of Statistics

YOUR
SLEEPLESS
NIGHTS ARE COMING

ARAMBIKALAMA

The Induction Program for the Academic Year 2023 was inaugurated in the Department of Statistics with great enthusiasm and excitement. The program was organized to introduce the activities of the department to the freshers and make them feel welcomed in the campus.

The **ARAMBIKALAMA** comprised of various activities that were aimed at providing a comprehensive overview of the curricular and extracurricular activities of the department. The freshers were introduced to MOOC courses, certificate courses, skill sharing programs, and invited talks by experts. They were informed about the various academic and research opportunities available in the department. To familiarize the freshers with the campus, gamification techniques were used, which made the activities more fun and interactive. The students were divided into teams, and they had to complete certain tasks that were designed to make them explore the campus and its facilities.

In addition to the curricular activities, the freshers were also introduced to the extracurricular activities of the department. They were informed about the various clubs and societies that exist in the department, such as the **Stats Club**. The clubs provide a platform for the students to showcase their skills and participate in various events and competitions.

The second-year students were assigned the task of training the freshers to create attractive LinkedIn profiles. The session was conducted by an expert in the field, and it was aimed at helping the freshers to showcase their skills and talents to potential employers.

Overall, the Induction Program- ARAMBIKAKAMA was a great success. It provided a platform for the freshers to interact with their peers, faculty, and staff, and get a glimpse of the activities and opportunities available in the department. The program was aimed at helping the students to develop their skills, knowledge, and confidence, and to prepare them for a successful academic and professional journey.

INAGURATION

Induction Programme-Day 1

Job Prospects in RBI for Statisticians

Joice John

Assistant Adviser
Monetary Policy Department
Reserve Bank of India

September 03, 2022
Time : 11.00 am

On September 3, 2022, an induction program was conducted for the academic year 2022-23 by **Mr. Joice John**, Assistant Adviser, Monetary Policy Department, **Reserve Bank of India**. Mr. Joice delivered a lecture on the scope of statistics in the banking industry and the job prospects in RBI for statisticians.

Mr. Joice began his talk by highlighting the importance of statistics in the banking sector. He emphasized that banking is a data-intensive industry, and data-driven decision-making is critical for the success of any bank. He discussed the various areas in banking where statistics play a crucial role, including credit risk assessment, fraud detection, and macroeconomic analysis.

Mr. Joice then focused on the job prospects in RBI for statisticians. He explained the various roles that statisticians can play in RBI, including working in the monetary policy department, banking supervision, and economic research.

Mr. Joice also discussed the qualifications and skills required to work as a statistician in RBI. The lecture was followed by a Q&A session, where students had the opportunity to ask Mr. Joice questions on various aspects of statistics in banking and job prospects in RBI. The session was informative and interactive, and students found it useful in understanding the potential of statistics in the banking industry and the opportunities available in RBI.

THE AGE OF ANALYTICS

September -16, 2022
Time 10:30-11:30

Dr. Ginto Pottackal

Principal Statistical Scientist
PPD

On the second day of the induction program for the newly admitted MSc students, Dr. Ginto, the Principal Statistical Scientist at PPD and an alumnus of our department, delivered a talk on 'The Age of Analytics.' The talk was informative, engaging, and thought-provoking, and it was attended by the students, faculty members, and staff of the department.

Dr. Ginto began his talk by defining analytics and explaining its significance in today's world. He emphasized that analytics is not just about collecting and analyzing data but also about using it to make informed decisions that can have a significant impact on businesses and society. He then discussed the evolution of analytics and how it has transformed from simple data analysis to sophisticated machine learning techniques, artificial intelligence, and big data analytics.

Next, Dr. Ginto talked about the various domains where analytics is being applied, including finance, healthcare, marketing, and sports. He shared some real-life examples of how analytics is being used in these domains to solve complex problems and make data-driven decisions. He also highlighted the importance of data privacy, security, and ethics in the age of analytics and how organizations are addressing these issues.

ഞാൻ എങ്ങനെ ഇങ്ങനെ ആയി!

A platform that gives students the opportunity to hear from their seniors about their journey and experiences from college to the corporate world.

The "Njan Engane Ingane Ayi" program is a valuable resource for students who are about to embark on their own careers and are looking for guidance and inspiration from those who have already been through the process.

By sharing their experiences, the seniors provide valuable insights into the challenges and opportunities that lie ahead and offer advice on how to navigate the often complex and competitive world of work. The program is a great way for students to gain a better understanding of the different paths that are available to them, and to learn from the successes and failures of those who have gone before.

The "Njan Engane Ingane Ayi" program is also an excellent way for students to network with their seniors and build relationships that may be beneficial in the future. It provides a platform for students to ask questions, seek advice, and learn from the experiences of others.

Mr.Sreejith Vasudevan, Associate Manager Ernst & Young, Cochin joined in this program on 17-10-2022, and **Mathew Joseph & Anns Eldho** on 24-09-22.

ഞാൻ എങ്ങനെ ഇങ്ങനെ ആയി!

Sreejith V
Associate Manager, EY

Mathews Joseph
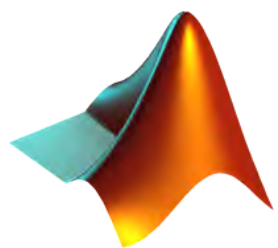*Biostatistician , IQVIA*

Anns Eldho
Biostatistician , IQVIA

Skill Sharing

9.30 AM-12.30 PM

An event where students gather to share their skills with their colleagues.

തീറ്റി മടി ബഹളം

An event to enjoy different types of food

12.30 PM-2.00 PM

ഞാൻ എങ്ങനെ ഇങ്ങനെ ആയി!

2:30PM-3:30PM

A platform which gives students the opportunity to hear from their seniors about their journey and experiences from college to the corporate world.

Best Compliments from

El Wealth Investment Services

Department of Statistics

Nirmala College , Muvattupuzha

നാ
താൻ
തൈ
നട

Fresh Start
Seed and Plant Giveaway Event

നവാഗതരായ കുട്ടികളുടെ ഇടയിൽ ജൈവകൃഷി പ്രോത്സാഹിപ്പിക്കുന്നതിന്റെ ഭാഗമായി സ്റ്റാറ്റിസ്റ്റിക്സ് വകുപ്പിലെ രണ്ടാം വർഷ വിദ്യാർഥികൾ പച്ചക്കറി വിത്തുവിതരണവും പച്ചക്കറി തൈ വിതരണവും സംഘടിപ്പിക്കുന്നു. മുളക്, മത്തൻ, കയ്പ, വിവിധതരം പയർ, തക്കാളി, കാപ്സിക്കം, കുക്കുമ്പർ, വെള്ളരി, കയ്പ്പക്ക തുടങ്ങിയ വിവിധ ഇനം പച്ചക്കറികളുടെ വിത്തുകളും തൈകളും വിദ്യാർഥികൾക്കു നൽകുന്നതാണ്.

The **"Enna Than Thai Nade"** program organized by the students of Statistics on 01-08-2022 is a wonderful initiative to promote vegetable farming among students and teachers. By distributing seeds of different vegetables and plants to students in the campus free of cost, the program encourages students to take up gardening as a hobby and also promotes healthy eating habits. The program not only provides students with the opportunity to grow their own food but also helps to create a sense of community and environmental awareness on campus.

പറമ്പിൽ കുഴികളുണ്ടേൽ നമ്മുടെ പണി എളുപ്പമായി ….

FOREIGN SCHOLARSHIPS FOR HIGHER STUDIES IN STATISTICS

## Ashbin Jaison

Research Fellow
University of Bergen, Norway

On February 02, 2023, the Department of Statistics organized an invited talk on the topic of "*Foreign Scholarships for higher studies in Statistics*" by **Mr. Ashbin Jaison**. Mr. Ashbin is currently pursuing his PhD in Statistics at the University of Bergen, Norway. The talk was aimed at providing information to M.Sc students about the various scholarship opportunities available for research studies in European countries.

The talk started at 11:30 a.m. and was attended by a significant number of M.Sc students, who were eager to learn about the opportunities available for higher studies in Statistics. Mr. Ashbin provided valuable insights into the different scholarship programs available for students interested in pursuing research studies in Statistics. He discussed the eligibility criteria, application process, and benefits of each scholarship program.

During the talk, Mr. Ashbin also shared his personal experiences of applying for and receiving scholarships for his PhD studies. He emphasized the importance of choosing the right scholarship program based on individual interests, academic background, and career goals.

The talk was highly interactive, with students asking a wide range of questions about the scholarship programs, application process, and the life of a student in Norway. Mr. Ashbin patiently answered all the questions and provided valuable advice to the students.

CO**TALK**TER
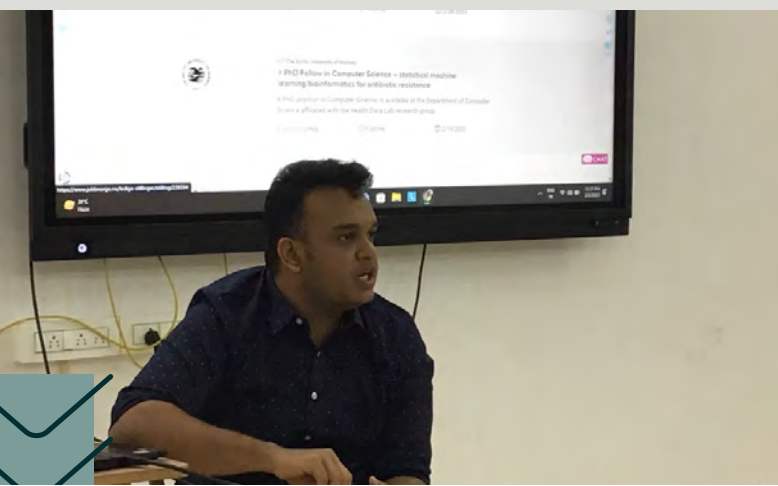
Counter Talk' is a unique program that has been designed to encourage students to present both sides of an event. The program involves two teams, with one team presenting the positive aspects of an event, while the other team counters their claim with the negative aspects. The main objective of this program is to enable students to make informed decisions after considering all the sides of an event. Additionally, 'Counter Talk' also aims to encourage students to think critically and come up with innovative ideas that could potentially solve problems.

The program is structured in a way that encourages students to engage in healthy debates and discussions. It provides a platform for students to express their views and opinions while also being able to listen to others' perspectives. By presenting both sides of an event, students are able to gain a comprehensive understanding of the event and are better equipped to make decisions. This stat Club organized six such talks.

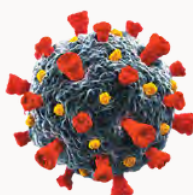**03-10-2022**

Attitude Towards LGBTQ+ Community

06-11-2022

Is there a need to increase Retirement Age ?

31-12-2022

Is India ready to face New COVID-19 Variant?

04-03-2023

Should Jails be Reformative Institutes?

24-02-2023

Decoding Kerala Budget 2023

06-11-2022

What Exactly is Your MLA Supposed To Do?

തീറ്റ കുടി ബഹളം

An event to enjoy different types of food.

STATSCLUB

12.30 PM-1.30 PM

24-09-2022

EXTENSION ACTIVITIES

As part of their academic curriculum, our MSc Statistics students were involved in extension activities aimed at applying statistical knowledge and skills in real-world scenarios. The students undertook several projects, including the creation of a website, data collection, and analysis for policy formulation.

Data4U Website

The MSc Statistics students created a website named **Data4U**, which provides a list of popular data hubs. This website is a valuable resource for researchers and students looking to obtain secondary data from different domains. The website contains information about various data repositories, such as the World Bank, UN Data, and Kaggle. The website's user-friendly interface allows visitors to navigate easily and find relevant data sources. This website is a valuable resource for statisticians and data scientists alike, and it showcases the students' technical expertise in website development.

Website for 'Ente Keralam'

The students also created a webpage titled "**Ente Keralam**," which showcases the unique features of Kerala. The webpage includes visuals that display Kerala's development, literacy rate, child mortality, life expectancy, and other indicators. The webpage's design and layout are visually appealing, and the information presented is informative and well-researched. The students' attention to detail in data visualization and their ability to communicate statistical information through visuals are noteworthy.

Ente Keralam   **Data4U**

Introduction to IBM SPSS

for

Students of

Mount Carmel College
Karukadom, Kothamangalam

29-11-2022 to 15-03-2023

Data analysis is not about what you know, it's about discovering what you don't know.

- Emanuele Ruffaldi

About the program

The IBM SPSS software is widely used in the field of data analysis, making it an essential tool for students pursuing commerce-related courses. To enhance their knowledge and skills in using this software, the MSc Statistics students of Nirmala College have offered a certificate program in IBM SPSS to the students of Mount Carmel College. The program is designed to cover various topics such as data entry in SPSS, Descriptive Statistics, Graphs, Correlation, and Regression analysis. The program consists of 30 hours of intensive training that aims to equip the participants with the necessary skills to use the software efficiently in their academic and professional pursuits. This certificate program provides an excellent opportunity for the students of Mount Carmel College to enhance their analytical skills and gain a competitive edge in the field of commerce.

BOOMERANG

CONTRIBUTORY TALKS

A platform for students to share new skills with their alma mater

Survey sampling with Virtual Reality : Conducting real data investigations within a classroom setting can be a challenge. The **Islands** platform provides students with the means to experience data collection by offering them the ability to conduct research in real time with a population of virtual humans living across three islands.

SPEAKERS

Basil Mathew Biju
Survey Sampling under Virtual Reality

Yadhukrishna R
Mentalism & Magic Show

TOPICS

- Virtual population in **Island**
- Demonstration of different sampling methods.
- Mentalism and Magic Show.

📅 September 30, 2022

🕐 3 P.M – 4 P.M

📍 **M A College,** Kothamangalam

SKILL SHARING
PROGRAMME
Maths & Stat Students

ABOUT THE PROGRAMME

The skill sharing program in **Mathematical Science** with students of other institutions is a fantastic opportunity for students to learn from and collaborate with their peers from different educational backgrounds. Through this program, students have the chance to exchange knowledge and expertise on various mathematical concepts and techniques related to Data Science.

Date : 07-01-2023

Time: 9:30AM-3:30PM
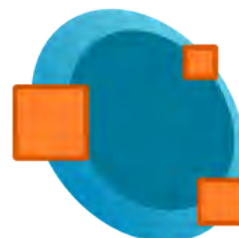
TOPICS

- Wolfram Cloud
- Natural Language Processing
- Image Processing in Octave
- Biodata preparation in Canva
- ChatGPT

Organized by First Year MSc Students

FOUNDED 1953

PARTICIPATING INSTITUTIONS

- Government College Kottayam
- CMS College Kottayam
- St. Stephen's College Uzhavoor
- MA College Kothamangalam
- Sree Sankara College Kalady
- Newman College Thodupuzha

Department of Statistics

Nirmala College Muvattupuzha

Skill
Sharing Program

Newman College, Thodupuzha

MA College, Kothamangalam

Sree Sankara College, Kalady

St. Stephen's College, Uzhavoor

CMS College, Kottayam

Government College, Kottayam

"By sharing our statistical skills, we not only empower ourselves but also uplift our community, paving the way for a brighter and more informed future."

SKILL SHARING
PROGRAMME

Commerce Students

ABOUT THE PROGRAMME

The program provided the students with valuable data analysis skills using SPSS, Google finance, and visualization techniques. The program also provided the students with an opportunity to learn from experienced data analysts, which helped to prepare them for careers in data analysis and related fields. The program consisted of lectures, practical sessions, and assignments.

Date : 05-11-2022

Time: 9:30AM-3:30PM

TOPICS

- Data Management in SPSS and Excel
- Visualization in Google DataStudio
- Live data extraction with Google Sheet
- Data Analaysis in SPSS
- Report writing in Google Doc.

PARTICIPATING INSTITUTIONS

- MA College Kothamangalam
- Sree Sankara College Kalady
- Newman College Thodupuzha
- St. Gerorge College, Vazhakulam
- Mount Carmel College,Karukadam

Organized by Second Year MSc Students

FOUNDED 1953

Department of Statistics

Nirmala College Muvattupuzha

Skill
Sharing Program

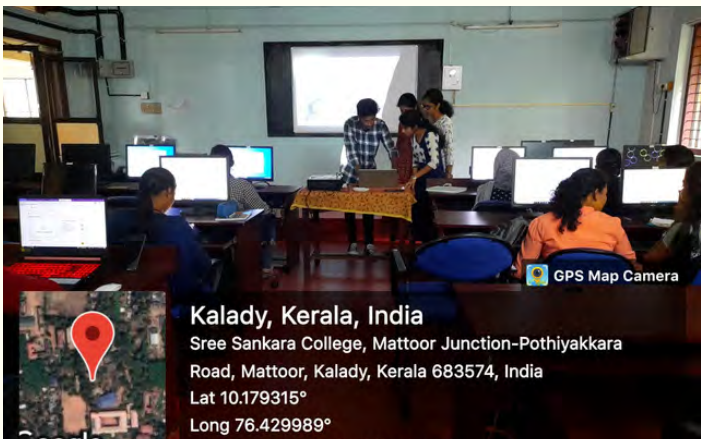November 5, 2022
Time : 9.30 AM-3.30 PM

Mount Carmel College, Karukadom

St. George College Vazhakulam

Sree Sankara College, Kalady

Kalady, Kerala, India
Sree Sankara College, Mattoor Junction-Pothiyakkara Road, Mattoor, Kalady, Kerala 683574, India
Lat 10.179315°
Long 76.429989°

Newman College, Thodupuzha

"Sharing skills not only empowers others, but it also enriches our own lives and creates a ripple effect of positivity in the world."

SOCIAL SERVICE ACTIVITIES
BY STATSCLUB

WE RISE BY lifting OTHERS

Education Support Program by Students of Statistics

It's heartwarming to hear about the social service activities that the Statistics students engaged in to help a needy student of another department. By gifting all types learning aids, they have taken a step towards creating a more inclusive and supportive learning environment for a needy student. Additionally, their gesture of distributing Christmas cakes and greetings cards to all supporting staff of the college during Christmas celebrations shows their appreciation for the hard work and dedication.

These social service activities not only benefit the recipient but also create a sense of community and goodwill among the students of the college. It is encouraging to see young individuals taking an active role in making a positive impact in their community and inspiring others to do the same.

Peer Learning Programs

Biostatistics
& Research Methodology

The certificate course in MS Excel and Google Sheets for the post-graduate students of MSc Zoology by first-year MSc students of Statistics was an initiative taken to promote interdepartmental collaboration among students. The course was designed to equip the MSc Zoology students with the necessary skills to use MS Excel and Google Sheets for the analysis of data related to Biostatistics topics in their syllabus. The course started on 26-10-2022.

The peer-to-peer learning program was a unique opportunity for the MSc Zoology students to learn from their counterparts in the Department of Statistics. The course was aimed at providing a practical understanding of data analysis and manipulation techniques, which are essential in the field of Zoology. The course was conducted over a period of four weeks, and it consisted of both theoretical and practical sessions.

The peer-to-peer learning program also helped in promoting interdepartmental collaboration among students. The MSc Zoology students were able to learn from their counterparts in the Department of Statistics and gain valuable insights into the field of Biostatistics.

Biostatistics for Botany Students

As part of a peer-to-peer learning program, second-year MSc Statistics students conducted a certificate course in Basic Statistics for BSc Botany students. The aim of the course was to provide the students with the necessary knowledge and skills to analyze data related to Biostatistics topics in their syllabus. The program also aimed at promoting interdepartmental collaboration among students. The certificate course in Basic Statistics for BSc Botany students was a successful initiative undertaken by the MSc Statistics students. The course provided the BSc Botany students with the necessary knowledge and skills to analyze data related to Biostatistics topics in their syllabus. The peer-to-peer learning approach adopted for the course also promoted interdepartmental collaboration among students. Overall, the course was a valuable learning experience for both the MSc Statistics and BSc Botany students involved.

Training programs on Technology and Digital skills

MSc Statistics students organized a training program for students from other departments to enhance their technical and professional skills. The training program included several workshops on SPSS, Google Sheets, Natural Language Processing (NLP), Linguistic Analysis, CV making with Canva, and training in ChatGPT.

SPSS Workshop : 25-08-22

The SPSS workshop was designed to provide hands-on training to students on statistical analysis using the SPSS software. Students were introduced to the basic concepts of statistical analysis and were taught how to use SPSS to perform various statistical tests. The workshop was conducted in small groups to ensure individual attention and maximum participation. Students of Commerce from Newman College, Thodupuzha attended this program.

Google Sheets Workshop

The Google Sheets workshop was aimed at teaching students how to use Google Sheets for data analysis and visualization. The workshop covered the basics of using Google Sheets, including creating and managing spreadsheets, formatting data, and creating charts and graphs. Students M.Sc Zoology attended this program.

NLP and Linguistic Analysis Workshop:

The NLP and Linguistic Analysis workshop focused on teaching students how to use NLP and linguistic analysis tools to analyze text data. Students were taught how to use various NLP tools such as Wolfram Cloud to perform sentiment analysis, entity recognition, and text classification. They were also introduced to linguistic analysis techniques such as part-of-speech tagging and dependency parsing. Students from BA Communicative English attended this program.

CV Making with Canva Workshop:

The CV Making with Canva workshop was designed to teach students how to create a professional CV using the Canva software. Students were taught how to use various templates, layouts, and design elements to create a visually appealing and effective CV.

Training in ChatGPT: 14-12-23

The training in ChatGPT was aimed at providing students with hands-on experience in training a language model. Students were taught how to use the ChatGPT platform to train a language model and were given an opportunity to develop their own chatbot.

On Augest 25th, 2022, a workshop on Statistical Package for Social Sciences (SPSS) was conducted for the commerce students of Newman College, Thodupuzha. The workshop aimed to introduce the students to the basic concepts of data analysis using SPSS and to provide hands-on training on its usage. The SPSS workshop was a great success, and the students found it to be very informative and useful. The workshop provided the students with a strong foundation in the basics of data analysis using SPSS, and they were able to gain hands-on experience using the software
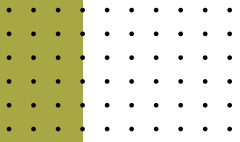
FESTIVAL FRENZY

Onam Celebrations

The Onam celebrations organized by MSc Students of Statistics were a great success. The event provided an excellent opportunity for students to come together and celebrate their cultural traditions.The event was held to welcome the newly admitted students of the first year of MSc Statistics, and it included various cultural activities and traditional food.

Christmas Celebrations

The MSc Students of Statistics organized a Christmas celebration to spread the message of love and peace among the college community. The event was held on campus, and it included various activities such as a meeting to share Christmas messages, cake cutting ceremony, and distribution of Christmas greeting cards and cakes to the supporting staff.The students arranged a meeting to share Christmas messages and spread the joy of the festival. They spoke about the significance of Christmas and how it is celebrated across the world. To express their gratitude, the students distributed Christmas greeting cards and cakes to all the supporting staff in the college. This gesture was greatly appreciated by thesupporting staff, who were happy to receive the gifts from the students.

ಕಲಾವಿದ ಆನಂದು ಕೃಷ್ಣನ್

Versatile Voice

Anandhu Krishnan is a first-year M.Sc Statistics student and a multitalented artist with a passion for music and voice acting. He is a Kannada dubbing artist, having lent his voice to several films and television shows in the Kannada language. Additionally, he is also an accomplished singer, having performed in various musical concerts and events.

Online Orientation Program

The field of data science and statistics is rapidly growing and becoming an increasingly popular career choice for students. However, many students who are seeking higher studies in data science or statistics may not have a clear understanding of the various career paths available to them. To address this, an online orientation program titled "Unleashing the Power of Data: Exploring Career Paths in Statistics" was organized.

The main objective of this program was to help students gain a better understanding of the various career paths available in data science and statistics.

The program was designed specifically for students who have completed their undergraduate studies and are interested in pursuing higher studies in these fields. The program aimed to provide students with valuable insights into the various career paths available in data science and statistics, and the skills and knowledge required to succeed in these fields. Additionally, the program also provided students with information on various academic programs and resources available to them to pursue their career goals in these fields.

StatsClub

LAUGHING LESSONS
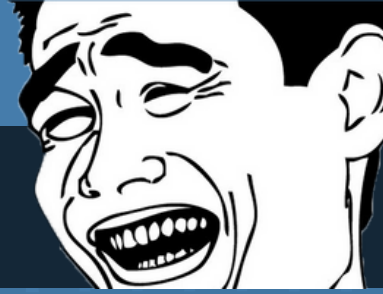
Creating "reels" (or real-life memes) is a fun and creative way for students to inject some humor and laughter into the classroom. Laughter is a powerful tool that can reduce stress and create a positive learning environment. When students are relaxed and enjoying themselves, they are more likely to be engaged and motivated to learn. Here is a sample collections of videos created by M.Sc Statistics students in this accademic year.

നാ താൻ പോയി തൈ നട്

വാഴക്കുല
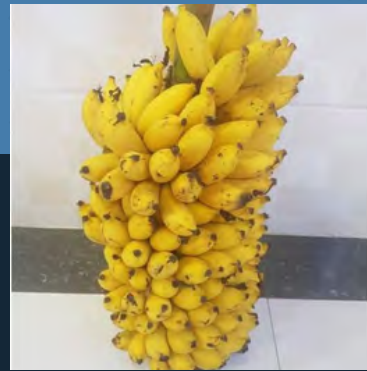
Christmas Celebrations

Dance

Onam Celebrations

Study Tour- 2023

GOA
& FORT AGUADA
January 19-22, 2023

"Study nature, love nature, stay close to nature. It will never fail you"

M.Sc Statistics
Nirmala College, Muvattupuzha

Increase your job prospects with the necessary skills for professional positions in Data Science and Statistics

Master of Science (M.Sc) in Statistics is an advanced degree program designed to provide specialized training in Analytical Statistics that finds its application in computational and data sciences. The course aims to help students develop statistical programming skills with a career prospect in the corporate. The two years M.Sc Statistics degree program helps students to gain strong methodological foundations in analytical statistics, handle statistical consultations and learn the various techniques, skills, and use of tools.

Program Highlights

- Industry-Academia collaborations.
- Alumni Support for Placement & Projects.
- Certificates courses in SAS, R, Python, Wolfram Cloud, and Google Analytics.
- Communication skills & German courses.
- Short-term courses by Data Scientists.
- Joint projects with students from foreign countries.
- Internships and Industrial Visits.
- Experiential learning through built-in projects works as part of the curriculum.
- Peer teaching and skill-sharing programs.
- Additional Skill development programs.

Facilities

- Smart Class Rooms.
- Free License for edX, DataCamp, DataQuest, Coursera, Microsoft 365 and Cognitive Class.
- Computer lab with high speed internet.
- Laptop Bank for the needy.
- Moodle Learning Management System.
- Licensed Statistical and Mathematical Softwares.
- Learning through the case studies, mini-projects, action learning projects and simulations.
- VLE for learning sampling techniques.

For further details

email : statistics@nirmalacollege.ac.in
www.nirmalacollege.ac.in
Phone: +91 9447003905

"Statistical thinking will one day be as necessary for efficient citizenship as the ability to read and write." - H.G. Wells