

DEBARSHI CHAKRABORTY

Address: 19 Abhay Mukherjee Lane, Indrapuri, Belgharia, Kolkata -700056

☎ +91-8902403477 ✉ maharajtheboss@gmail.com 🌐 [Personal Webpage](#)

EDUCATION

Indian Statistical Institute

*Master Of Statistics - **Percentage** - 71%*

09 2021 – 05 2023

Delhi and Kolkata, India

St.Xavier's College (Autonomous),Kolkata

*Bachelor of Science (Hons) in Statistics - **Percentage** - 77.17%*

07 2017 – 09 2020

Kolkata, West Bengal,India

Ariadaha Kalachand High School

*Class XII - **Percentage** - 89.80% Class X - **Percentage** - 94.47%*

05 2009 – 05 2017

Kolkata, West Bengal,India

PROJECTS

A Study on Gaussian Graphical Models 🔗 | Summer Project

07 2022

- A review on the available literature on probabilistic graphical models was done.What are graphical models.Here we learnt how are they useful in statistics and examples of different types of graphical models.Here we particularly focus on undirected graphical models where all the nodes are from a well known distribution -Multivariate Normal.Simple to advanced and modern methods to decipher the underlying probability distribution through graphs are presented.Here we did simulations to verify the theoretical facts and also tried to implement our learnings some real life datasets.
- Supervisor:Dr.Arindam Chatterjee

Comparative Study between LDA, QDA, KNN, SVM 🔗 | Curriculum Project

06,2022

- We focus on the problem of classification.In our coursework we learnt Discriminant Analysis.Going beyond that we studied probably the most simple algorithm K-Nearest Neighbours and a comparatively more mathematically established method Support Vector Machines.Then we tried to understand the advantages and disadvantages of these methods compared among themselves in different scenarios.First we simulated several artificial data and compared how good they are, finally we applied our learnings on a real life dataset.
- This was done as a part of our **Multivariate Analysis** coursework in M.Stat 1st Year.
- Supervisor:Dr.Deepayan Sarkar

A Simulation Study on Kernel Density Estimation 🔗 | Curriculum Project

05 2022

- We start with the simplest form of density estimation i.e. Histograms.We show their drawbacks and step by step trying to overcome them, we eventually illustrate the idea of Kernel Density Estimation.We simulate from different distributions and taking different choices of kernels show how good the estimates holds.We also verify the asymptotic properties.Using a similar approach via kernels, we try to estimate the CDF also.Finally we do a case study.Essentially,practical verification of theoretical results learnt in class and applying that to real dataset was the objective.
- This was done as a part of our **Nonparametric Inference and Sequential Methods** coursework in M.Stat 1st Year.
- Supervisor:Dr.Isha Dewan

Analysis of Petrol Consumption Data 🔗 | Curriculum Project

12 2021

- A data was given to us with the response and the predictors mentioned.Starting with the basic linear regression model with all predictors involved, we performed regression diagnostics.We did appropriate transformations to the data to remove unwanted stuff like heteroscedasticity,multicollinearity,non-normality of errors,etc.Also,variable selection was performed.We finally present the model which is the best fit to the data.Basically practical application of theoretical concepts learnt in the coursework.
- This was done as a part of our **Regression Techniques** coursework in M.Stat 1st Year.
- Supervisor:Dr.Swagata Nandi

Modelling the UEFA Champions' League 🔗 | B.Sc Final Year Dissertation

05 2020

- Here we try analyse the number of goals scored in the UEFA Champions' League over the years.Naturally an application of time series analysis on real dataset.Although it is clear that it is a time series data, we justify that what made us think that the number of goals scored in successive years may be correlated.We try to build a simple mathematical model for the goal ratio- which is more reasonable to work with rather than the number of goals.After estimating the trend using Mathematical Curve Fitting, we try to model the remaining part using ARMA.
- Supervisor:Dr.Ayan Chandra

PUBLISHED ARTICLES

A Generalisation of the Banach's Matchbox Problem

01 2019 – 03 2019

Prakarsho(2019), Annual Magazine of Dept of Statistics

St.Xavier's College(Kolkata)

- An attempt to device a generalised version of the Banach's Matchbox Problem and show an application in the field of Computer Science
- Co Authors : Niladri Kal,Sreejit Roy

RELEVANT COURSEWORK

- **Statistics**
 - Probability Theory
 - Descriptive Statistics
 - Statistical Inference
 - Regression Analysis
 - Multivariate Analysis
 - Large Sample Theory
- **Mathematics**
 - Real Analysis
 - Linear Algebra
- **Programming**
 - Data Analysis Using R
 - Statistical Computing in R
 - Introductory programming in C
- Stochastic Processes
- Nonparametric Inference
- Linear Models
- Survey Sampling
- Analysis of Variance
- Design of Experiments
- Econometrics
- Statistical Genomics
- Pattern Recognition
- Statistical Computing
- Time Series Analysis
- Bayesian Inference
- Calculus
- Advanced Calculus
- Classical Algebra
- Numerical Analysis
- Object Oriented Programming in C++
- Data Analysis Using Minitab
- Web Development in HTML

LANGUAGES AND TECHNICAL SKILLS

- **Languages:** English, Bengali, Hindi
- **Programming Languages:** R,C,C++,Python
- **Softwares:** RStudio, LaTeX, Minitab, MS Excel,Tableau

EXTRACURRICULAR

West Bengal Table Tennis Association

05 2009 – 09 2019

Professional Table Tennis Player

India

- Represented the district North 24 PGS from seasons 2009-2011 and then represented North Kolkata till 2019.
- Bronze Medal in West Bengal State Table Tennis Championship 2019 (Team Event) Youth Boys' category.
- Bronze Medal in West Bengal State Table Tennis Championship 2015 (Team Event) Junior Boys' category.
- Bronze Medal in West Bengal State Table Tennis Championship 2014 (Team Event) Junior Boys' category.
- All certificates attached here. 

Department of Sports,St.Xavier's College,Kolkata

07 2017 – 05 2020

Member of College Table Tennis Team

Kolkata

- Represented the college in different tournaments ,not all are to be mentioned.
- Silver Medal in University of Calcutta Inter College Table Tennis Championship 2019 (Team Event) Boys' category.

Sarbabharatiya Sangeet -O- Sanskriti Parishad

01 2007 – 10 2015

Student of Art

Kolkata

- Received **Shilpa Visharad** degree in 2015.
- Certificates attached here. 