

Deepra Ghosh

CONTACT INFORMATION

Permanent Address:

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EDUCATION

Doctor of Philosophy, Statistics

Temple University
Philadelphia, Pennsylvania, USA

August 2022 – present

Master of Science, Statistics

Ballygunge Science College, *University of Calcutta*,
Kolkata, West Bengal, India

August 2019 – August 2021

(1st sem SGPA 6.84/10.00)

(2nd sem SGPA 7.24/10.00)

(3rd sem SGPA 6.77/10.00)

(4th sem SGPA 7.88/10.00)

(CGPA 7.19/10.00)

- **Specialization in Semester 3:**

Analysis II (Functional Analysis, Complex Analysis)

- **Two Electives in Semester 3 Other than Statistics:**

1. Pure Mathematics (Abstract Algebra, Graph Theory, Calculus, Combinatorics)
2. Applied Mathematics (Ordinary Differential Equations, Partial Differential Equations, Numerical Analysis)

- **Specialization in Semester 4:**

1. Advanced Parametric Inference
2. Nonparametric Methods
3. Statistical Genetics

Bachelor of Science, Statistics

Ramakrishna Mission Residential College Narendrapur (Autonomous)
Kolkata, West Bengal, India

July 2016 – July 2019

(Major 83.5%)

(CGPA 9.18/10.00)

- Major: Statistics
- Minors: Mathematics, Computer Science (**Topped** in Computer science for 4 semesters)

Higher Secondary : (West Bengal Council for Higher Secondary Education)

South Point High School, Kolkata, West Bengal, India

(2016)

- Subjects : Mathematics, Physics, Chemistry, Biology
- Percentage: 90.8

Secondary : (West Bengal Board for Secondary Education)
South Point High School, Kolkata, West Bengal, India. (2014)

- Percentage: 91.28

ACHIEVEMENTS

- Attained Rank **4** in Bachelor's degree in College
- Attained All India Rank **12** in **Graduate Aptitude Test in Engineering, 2022**, in Statistics paper

AWARDS AND FELLOWSHIPS

Recipient of *INSPIRE* scholarship for higher secondary board exam (given by the *Department of Science and Technology*, Govt. of India) (2016-2021)

TECHNICAL SKILLS

Programming and Scripting Languages: C, Python, R, Minitab, Microsoft Office, SQL, HTML
Operating Systems: Windows
Tools: Latex, IBM Studio
Database Tools: Structured Query Language(Introductory)

LINGUAL SKILLS

English, Bengali, Hindi

JOB EXPERIENCE

Statistical Trainee at *Indian Statistical Institute* (February 2022 - present)
- One project on *Discrete and Quantum Optimization in Progressively Censored Data*, supervised by **Dr. Subhomay Maitra** and **Dr. Biswabrata Pradhan**
- One project on *Covid-19 effect on people of Kolkata*, supervised by **Dr. Mridul Nandi**

ONLINE COURSES AND WEBINARS

Online courses:

- *IBM Data Science* offered by IBM via Coursera
- *Data-driven Astronomy* offered by University of Sydney via Coursera
- *Bayesian Statistics* offered by University of California, Santa Cruz via Coursera

Webinars:

- *Clinical Trials*
by Dr.Rahul Bhattacharya (26.07.2020)
- *Understanding Covid-19 Progression with Data Science*
by Dr.Sourish Das and Dr.Arni S.R. Srinivasa Rao (13.08.2020)
- *Statistics: Yesterday, Today and Tomorrow*
by Dr.Bimal Roy and Dr.Gourangadeb Chattopadhyay (29.07.2020)
- *International Webinar on Protection of Heart, Kidney, Liver and Maintaining Normal Psychology and Blood Pressure amidst Covid-19 Lifestyle Changes*
Organized by the Dept. of Zoology, Dr. Shyamaprasad Mukherjee University (22.08.2020-23.08.2020)

PROJECTS

Systematic Statistical Analysis of the Effect of a Pharmaceutical Compound on the Expression of a Gene in Mice
- supervised by **Dr. Nitish Mahapatra**, Dept. of Biotechnology, Indian Institute of Technology, Madras (2019)
Details: Elementary statistical tests were performed to determine significance of effect of a pharmaceutical compound.

Multi-pronged Approach for Bracketing the Prediction of Covid-19 Cases in India
- supervised by **Dr. Gopal Krishna Patra**, CSIR Fourth Paradigm Institute (2020)
Details: Various machine learning and statistical methods like **Long Short Term Memory (LSTM)**, **Susceptible-Exposed-Infected-Recovered-Deceased (SEIRD) modelling and Auto Regressive Integrated Moving Average (ARIMA) models** were developed to study Covid-19 progression in India and predict the number of deceased cases using these models.

Effect of Biochemical, Physiological and Genetic Factors on Prevalence of Hypertension
- supervised by **Dr. Nitish Mahapatra**, Dept. of Biotechnology, Indian Institute of Technology, Madras (2021)
Details: Classification methods, Ridge Regression and LASSO were used to fit Logistic models to identify factors influencing Hypertension.

PUBLICATIONS

- Ghosh, S., Ghosh, D., 'Integrated morphometric and molecular approaches to screen hybrid from wild *Labeo rohita* and *Labeo catla* parent populations', *Molecular Biology Reports*, 51(1), 2024
- Ghosh, S., Ghosh, D., 'Prevalence of CVD risk factors among some tribal and nontribal populations of Jharkhand', *Spatial and Spatio-temporal Epidemiology*, 2021
- Roy, M., Ghosh, D., 'Multi-pronged Approach for Bracketing the Prediction of Covid-19 Cases in India', *Nanoelectronics Circuits and Communication Systems Conference*, 2020

EDUCATIONAL ACTIVITIES:

- Delivered a talk on conference paper 'Multi-pronged Approach for Bracketing the Prediction of Covid-19 Cases in India' at Nanoelectronics Circuits and Communication Systems Conference, 2020
- Tutored two students in class 12 mathematics and statistics and one undergraduate student in statistics
- Delivered lectures on **Quantitative Biology** at Dr. Shyamaprasad Mukherjee University

INTERESTS

Multiple Hypothesis Testing, Mathematical Statistics, Sports Analytics, Causal Inference

EXTRA-CURRICULAR ACTIVITIES

- Reading books
- Playing all sorts of sports like football, table tennis, swimming and working out
- Performed social activities as a member of **National Service Scheme (NSS)** (like serving food and providing healthcare amenities to poor, helping blind students in their projects, etc)

STANDARDIZED TEST SCORES

TOEFL iBT: 102 / 120

- Reading: 26/30
- Listening: 28/30
- Speaking: 23/30
- Writing: 25/30

GRE General: 318 / 340

- Verbal Reasoning: 153/170 (59th percentile)
- Quantitative Reasoning: 165/170 (84th percentile)
- Analytical Writing: 4.0 / 6.0 (54th percentile)