Kaushik Thakkar

Curriculum Vitae

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Education

M.Sc.   **Indian Institute of Technology Kanpur**, Statistics   July 2022 to May 2024
- **CPI**: 9.08/10.0
- **Coursework:** Probability Theory, Statistical Computing, Multivariate Analysis, Data Science Labs, Inference, Machine Learning, Bayesian Analysis.

B.Sc.   **Ramakrishna Mission Residential College Narendrapur**, Statistics   July 2019 to May 2022
- **CPI**: 9.59/10.0
- **Coursework:** Statistics, Mathematics and Computer Science.

Experience

Barclays Global Service Centre Private Limited, Risk Graduate Analyst   Noida, India / July 2024-

Center for Artificial Intelligence and Robotics (CAIR), DRDO, Intern   Bengaluru, India / May 2023 to July 2023 / 2 months
Mentor: Ms. Lakshmi Annamalai, Sc 'E'
- Conducted a literature review on Out-Of-Distribution(OOD) detection methods including Mahalanobis method, KL-Matching, and energy/entropy-based methods.
- Compared the effectiveness of different OOD detection methods with the method developed by CAIR in identifying out-of-distribution samples using standard datasets.

Technologies

Languages: Python, R, SQL, LaTeX

Softwares: Visual Studio Code, Excel, PowerPoint

Projects

Binary Classification Using Some Notions Of Kernelized Data Depths   *Jan-May 2024*
Mentor: Dr. Subhajit Dutta ⧉, IIT Kanpur
- Explored kernelized data depth functions for binary classification and introduced novel depth measures (sphere depth and kernelized spatial depth) capturing multimodality in data clouds.
- Compared the efficacy of depth-based features in binary classification using machine learning algorithms and simulated data.

Pairs Trading: A Strategy Exploration   *Sept-Dec 2023*
Mentor: Dr. Amit Mitra ⧉, IIT Kanpur
- Identified co-integrated stock pairs and developed a trading strategy using moving averages.
- Optimized trading signal thresholds to maximize profits and tested potential profitability.

Analysis Of Indian Web Series   *Aug-Dec 2022*
Mentor: Dr. Dootika Vats ⧉, IIT Kanpur
- Scraped data from IMDb using rvest library, performed exploratory analysis, and extracted valuable insights.
- Developed an interactive R Shiny app enabling users to explore data through dynamic plots and visualizations.

Predicting Tomorrow's Rainfall in Australia *Aug-Sept 2021*
Self project

- Completed data preprocessing and exploratory data analysis.
- Implemented machine learning models and achieved 85.95% validation set accuracy through iterative refinement.

Awards and Achievements

- Awarded the Ramesh Chandra Yadav Scholarship for the academic year 2022-23 and 2023-24 at IIT Kanpur.
- Secured All India Rank 41 in Joint Admission Test for Masters (JAM) - Mathematical Statistics, 2022.