

# TAPOJIT BHATTACHARJEE

M.Sc. in Big Data Analytics

Ramakrishna Mission Vivekananda Educational and Research Institute, Belur Math, West Bengal, India

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## PROJECTS

- **CleanVision using DIV2K** : Deep Learning based Real-Time Denoising, Inpainting and Restoration of Noisy Images (Computer Vision)  
**Keywords:** OpenCV (cv2), PyTorch, TensorFlow, U-Net, DnCNN, Image Denoising, Image Inpainting, Gaussian Noise, Speckle Noise, Salt & Pepper Noise, PSNR, SSIM, Hyperparameter Sensitivity Analysis, Gradio, Real-Time Web Deployment Jan.'25 - Apr.'25, RKMVERI  
**Faculty:** Br. Bhaswarachaitanya
- **IPL Score Predictor:** A Deep Learning based approach on predicting the first innings score of an IPL match by merging ball-by-ball and matches dataset via uniqueID  
**Keywords:** DL, IPL, Ball-by-Ball Data, Match Data, Data Merging via uniqueID, Feature Engineering, LSTM, GRU, Transformer, CNN-BiLSTM, Ensemble Model, MAE, RMSE, R<sup>2</sup> Score, Gradio, Web Deployment Jan.'25 - Apr.'25, RKMVERI  
**Faculty:** Dr. Soumitra Samanta
- **Table Question Answering (TQA) with LLMs:** Large Language Model-Based Natural Language Question Answering over Structured Tabular Data  
**Keywords:** TQA, LLM, NLP, Tabular Data Understanding, SQL Generation, LangChain, PyMySQL, pandas, CSV/Database Integration, Prompt Engineering, Semantic Parsing, Text-to-SQL, Retrieval-Augmented Generation (RAG), Zero-shot Learning, Few-shot Prompting, Web Deployment, GPT-based Models June'25 - Ongoing, RKMVERI  
**Faculty:** Mr. Champak Dutta
- **Rainfall Prediction Analysis:** A typical ML project for predicting rainfall in a certain area using some factors  
**Keywords:** Kaggle, Numpy, Colab, Pandas, Models implemented: Logistic Regression, Decision Tree, Random Forest, SVM, XG-Boost, KNN, Evaluation Metrics: Accuracy, F1 score, ROC-AUC, XG-Boost outperformed Aug.'24 - Nov.'24, RKMVERI  
**Faculty:** Br. Bhaswarachaitanya
- **Demographic Drift:** Modeling and Predicting Portugal's Population Trajectory  
**Keywords:** Dataset (1950-2020), Trend, Curve Fitting, Population Forecast, Linear Trend, Quadratic Trend, Parabolic Trend, S-Curve, Exponential Curve, MAD, MSD, MAPE, Sex Ratio, %error, Prediction of 2050, MalevsFemale Population & Population Projection  
**Faculty:** Dr. Sankha Bhattacharya March'23 - July'23, Asutosh College

## COURSEWORK

- Deep Learning
- Computer Vision
- Artificial Intelligence
- Data Structures & Algorithms
- Time Series & Survival Analysis
- Machine Learning
- Natural Language Processing
- Advanced Statistics
- Java & Hadoop
- Econometrics & Finance
- Spectral Graph Theory
- Database Management System

## ACHIEVEMENTS

- **INSPIRE Scholar** : Selected & awarded under Scholarship for Higher Education (SHE) Programme (Sept'20 - Aug'23)
- **HS Rank Holder** : Achieved 4th rank in South 24 Parganas & 14th in WB (July'20)
- **Madhyamik Rank Holder** : Achieved 1st rank in South 24 Parganas & 11th in WB (June'18)
- **Jahar Lal Chandra Merit Scholarship** : Awarded for securing the 1st position in South 24 Parganas in WBBSE result (Mar'19)

## EDUCATION

- **Ramakrishna Mission Vivekananda Educational and Research Institute, Howrah**  
**M.Sc. in Big Data Analytics**  
2024 - Present (Sem-1) CGPA: 6.39
- **Asutosh College Kolkata**  
**B.Sc.(Hons.) in Statistics**  
2020 - 2023 CGPA: 7.775
- **Sarada Vidyapith(H.S.)**  
**West Bengal Council of Higher Secondary Education (10+2)**  
2018 - 2020 Score: 97%  
**West Bengal Board of Secondary Education (10)**  
2012 - 2018 Score: 97%

## TECHNICAL SKILLS

- **Programming Languages:** Python, Java, SQL, R,  $\LaTeX$
- **Frameworks:** PyTorch, OpenCV, TensorFlow, Hadoop, Matplotlib
- **Tools:** Git/Github, Google Analytics, AWS, Oracle Database, Tableau, Power BI, MS Office
- **Operating System:** Windows, Linux (Ubuntu)

## ACTIVITY

- **Asutosh College**
  - Student Council Member [Nov'21 - Aug'23]
  - Volunteering, Organising events, sports, cultural programmes & coordinate with teachers on behalf of classmates [Mar'22 - July'23]
  - Unit Secretary [May'22 - Aug'23]
- **RKMVERI**
  - Fest Organiser, Core Committee Member **Perception 2025** Photography Team [Jan'25]
- **Problem Solver at HackerRank & Leetcode**
  - Solve Python Problems

## CERTIFICATIONS

- **NPTEL** : Top 5% scorer in Joy of Computing using Python (**Elite Silver**) (Aug'24 - Nov'24)
- **Forge: Deloitte Australia** - Data Analytics Job Simulation (May'25), **Accenture North America** - Data Analytics & Visualization Job Simulation (May'25), **BCG X** - Data Science Job Simulation (May'25)

## HOBBY

- Cricket, Music (Singing, Playing Guitar), Photography, Philately, Quizzing, Recitation