Kamesh Dubey

Mumbai, India
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EDUCATION

Indian Institute of Technology, BOMBAY **Aug'22 – Dec'24**
MSc. Applied Statistics and Informatics - CPI - 6.7 *Mumbai, India*

Gurukul Kangri University **Aug'18 – Jul'21**
BSc. Mathematics and Computing - CGPA - 8.6 *Haridwar, India*

SCHOLASTIC ACHIEVEMENTS

- Awarded the **MCM** Scholarship during both years of MSc. at Indian Institute of Technology Bombay *'24*
- Secured **AIR-50** in Mathematical Statistics, IITJAM 2022 among 2,912 candidates organized by IITR *'22*
- Achieved a remarkable **Department Rank 3** out of 120 BSc. Students at Gurukul Kangri University *'21*
- Received LIC HFL Vidhyadhan Scholarship for Graduation, awarded to **200** UG students across India *'20*

KEY PROJECTS

Oil Well Failure Prediction — MSc. Project *Jan–Apr '24*
Guide – Sanjeev V Sabnis, Department of Mathematics, Bombay
Co-Guide – Prof. Sujit K Ghosh, Department of Statistics, North Carolina State University
- Performed thorough EDA and **feature engineering**, handled missing values, and addressed data imbalance
- Conducted a comparative analysis of **Logistic** Regression and **Tree-Based** Models for the failure prediction
- Optimized Decision Tree by tuning hyperparameters on feature set, achieving a **79%** cross-validated F1-score

Stock Price Analysis — Course Project *Jan–Apr '24*
Guide – Prof. Sanjeev V Sabnis, Department of Mathematics, IIT Bombay
- Conducted a thorough statistical analysis of daily VWAP data and applied **ADF test** to assess stationarity
- Performed **Ljung-Box** diagnostic check on the **ARIMA** model, achieving a forecast with **MAPE** of **5.78%**

Bank Customers Segmentation — Course Project *Aug–Nov '23*
Guide – Prof. Siuli Mukhopadhyay, Department of Mathematics, IIT Bombay
- Enhanced interpretability by leveraging **PCA** and **factor analysis** to uncover latent variable in the dataset
- Segmented data using **K-Means** clustering and evaluated clusters via **Silhouette** Score and Elbow Method

Bike Rental Demand Prediction — Course Project *Aug–Oct '23*
Guide – Prof. Siuli Mukhopadhyay, Department of Mathematics, IIT Bombay
- Mitigated multicollinearity using **VIF**, addressed **influential points** enhancing stability and interpretability
- Reduced overfitting through Regularized Linear Regression, achieving an R^2 score of **80.1%** on the test data
- Verified model assumptions via residual analysis and K-S test and assessed coefficient significance with t-tests

TECHNICAL SKILLS

Programming Languages and Tools: Python, R, SQL, MLflow, Git, Docker
Machine Learning Libraries: Pandas, scikit-learn, statsmodels, PyTorch, nltk

COURSES UNDERTAKEN

- Machine Learning
- Regression Analysis
- Time Series Analysis
- Statistical Inference – I
- Probability – I
- Multivariate Analysis

POSITION OF RESPONSIBILITIES

PG Convener, Events and PR — E-Cell, IIT Bombay *Aug'22–Feb'23*
Asia's leading entrepreneurship-promoting student body with patronages from UNESCO.
- Executed Seed-Star Event, connecting 30+ startups and 20+ VCs/Angels for seed funding in E-Summit'23
- Onboarded 10+ outreach partners for promoting E-Summit'23 events through their different social media

Technical Counsellor — Hostel-4, IIT Bombay *Sep'22–Jun'23*
- Collaborated with a council team of 8 and guided the technical secretary to foster a vibrant hostel culture