

Aditya Mishra

Data Scientist, Decision Point Analytics
Masters of Technology, IIT Kanpur

in AdityaMishra | ☎ +91 7982617173
✉ adityamishra | ✉ adityamishra91535@gmail.com

Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2024	M.Tech, Civil Engineering	Indian Institute of Technology, Kanpur	8.75/10
2021	B.Tech, Civil Engineering	GGSIPIU, Delhi	8.59/10
2017	CBSE (XII)	Kendriya Vidyalaya, JNU, New Delhi	82.20%
2015	CBSE (X)	Kendriya Vidyalaya, JNU, New Delhi	10/10

Academic Achievement

- Secured **All India Rank 1252** in **Graduate Aptitude Test in Engineering(GATE) - Civil 2022** among 100K candidates
- Received a letter of appreciation and prize money from the Minister of Human Resource Development for securing 10 CGPA in class X

Work Experience

- Decision Point Analytics | Data Scientist** Aug' 24 - present
 - Forecasted market size of key tobacco products across multiple global markets
 - Trained and evaluated **multiple linear regression** models for different selected feature combinations achieving **MAPE** less than **2%**
 - Designed a scoring mechanism using statistical and business KPIs to identify best-performing models aligned with client requirements
 - Deployed robust forecasting pipeline using **Azure Databricks** and **MLflow** enabling real-time refresh based on the model divergence
 - Collaborated with the consulting team to develop a dynamic Excel tool for generating forecasts and conducting scenario analysis
- Reinforcement Learning based car following model for stop-and-go traffic | MTech Thesis | IIT Kanpur** Jun' 23 - Jul' 24
Dr. Pranamesh Chakraborty (Civil Engineering), Dr. Subrahmanya Swamy (Electrical Engineering), IIT Kanpur
 - Generated a **stop-and-go** traffic data by simulating a signalized traffic on **Vissim** simulator
 - Developed a **novel** reward function based on **TTC**, **space headway** and **jerk** along with penalties based on collision and negative speed
 - Trained a **DDPG** model which outperformed the existing models in terms of **safety**, **traffic flow efficiency** and **driving comfort**

Key Projects

- Crack Detection: Image Classification | Course Project: CE784A | Dr. Pranamesh Chakraborty, IIT Kanpur | (CNN)** Apr' 23
 - Developed a binary image classification model to classify cracked and uncracked surfaces on bridge decks, pavements and walls
 - Performed image pre-processing like **labelling**, **scaling** and **flattening** on **14.9k** images
 - Used a pre-trained CNN model **"Xception"** trained on **ImageNet** to classify images using **Transfer learning** achieving **77%** accuracy
- Amazon Fine Food Review Classification | Self project | (NLP)** May' 23
 - Performed text pre-processing like **labelling**, **data cleaning**, **stemming**, **stopwords removal** on **525k** Amazon fine food reviews
 - Removed class imbalance using **Random Under Sampler** and reduced the data to **114k** reviews
 - Employed NLP techniques like **Bag of Words**, **TF-IDF** and **Word2Vec** for text vectorization on the balanced dataset
 - Used multiple classification algorithms to classify the reviews as positive and negative, achieving **90.7%** accuracy with logistic regression
- COVID 19 Data Exploration | Self project | (SQL, Tableau)** Jun' 23
 - Conducted Covid-19 data analysis using SQL queries on **SQL Server Management Studio (SSMS)**
 - Analyzed **cases**, **deaths**, **vaccinations** and other factors using **Common Table Expression (CTE)**, **Temporary tables** and **views**
 - Visualized query results in **Tableau** to extract valuable insights from the Covid-19 dataset

Technical Skills

Languages: Python, SQL, C++	DL/RL: Tensorflow, Sklearn, OpenCV, Gym, Stable Baseline
Analytcs: Numpy, Pandas, Matplotlib, Seaborn, Statsmodels	Tools: Jupyter, Databricks, Excel, Tableau, \LaTeX

Relevant Courses

*Online

Probability and Statistics	Machine Learning with Databricks*	Statistical and Econometric Methods
Linear Algebra and ODE	Python for Time Series Analysis*	Machine Learning and Data Analytics

Positions of Responsibility

- Coordinator, Society of Civil Engineer (SOCE), IIT Kanpur** Jun' 23 - May' 24
 - Spearheaded a **3-tier** team of **40+ members** to organize events for the whole civil engineering community at IITK
 - Founding member** of IIT Kanpur's inaugural national-level civil engineering conclave, SANKALAN'24
 - As Media and Publicity Head for Sankalan'24, published articles in 40+ print and electronic media, partnered with prominent social media pages, and conducted outreach at local colleges, achieving 400+ participant registrations.
 - Hosted a Kaggle competition on image classification with prizes up to INR 6000, receiving a strong response across India
 - Conducted events such as Fresher's party, Farewell, alumni sessions, and social events, managing an annual budget of **INR 7 lakhs**
- Teaching Assistant, (CE 787A, CE 382A)** Aug' 23 - Apr' 24
 - Collaborated with a team of 6 TAs to assist professors in managing a class of 200+ BTech students.
 - Facilitated academic processes, including designing and grading assignments, quizzes, mid-semester, and end-semester exams