Zamiul Alam

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SUMMARY

Physics graduate with 3+ years of experience applying machine learning and quantitative methods to solve complex problems. Fast learner with exceptional attention to detail and a commitment to delivering high-quality results. Seeking opportunities in data science and quantitative analysis to tackle real-world challenges with data-driven solutions.

TECHNICAL SKILLS

- Languages & Platforms: Python, SQL, R, Tableau, Mathematica, MATLAB, C, Jupyter, Git, Hadoop
- Python Libraries: Pandas, NumPy, scikit-learn, Matplotlib, Seaborn, Folium, XGBoost, CATBoost, PyTorch, TensorFlow
- Machine Learning: Time, Series Analysis, Regression, Inference, Classification, Clustering, Boosted Trees, Neural Networks, Natural Language Processing, Large Language Models, Deep Learning
- Soft Skills: Communication, Collaboration, Adaptability, Leadership, Punctuality, Critical thinking, Creativity

CERTIFICATIONS

- The Erdős Institute Data Science Boot Camp: **Jul, 2025**
  Completed an intensive Data Science Boot Camp, developing end-to-end data science workflows including data cleaning, exploratory data analysis, predictive modeling, and results presentation through a team-based project.
- IBM Data Science Professional Certificate: **May, 2025**
  Completed a 12 Course Professional Certificate in Data Science and Machine Learning with hands-on experience in Python, SQL, data analysis, visualization, and model development through cloud-based projects and a capstone.

SELECTED PROJECTS

Finding Fraudsters - *The Erdős Institute* [LINK], [VIDEO], [SLIDES] **Jul, 2025**

- Developed a fraud detection model using boosted decision trees (BDT) on the IEEE-CIS Fraud Detection dataset.
- Dealt with a highly imbalanced dataset of 590,540 transactions, of which only 3.5% were fraudulent.
- Achieved 93% ROC AUC score using ensemble model of XGBoost, LightGBM and CATBoost.

Chicago Crimes Data Analysis – *Self-guided Project* [LINK] **Mar, 2025**

- Analyzed crime data from the Chicago Data Portal which contained 8 million rows and 22 columns.
- Used Seaborn and Folium to build interactive maps.
- Transformed complex data to easily interpretable visuals.

WORK EXPERIENCE

Washington University in St. Louis: St. Louis, MO **2023 - 2025**

Arts & Sciences Graduate Fellow

- Conducted research on Dark Matter and Neutron stars which involved complex numerical and statistical analysis.
- Served as Teaching Assistant for Graduate and Undergraduate level courses.

Northern Illinois University: Dekalb, IL **2021 - 2023**

Research Assistant & Teaching Assistant

- Conducted research on Particle Physics phenomenology which involved statistical analysis and machine learning.
- Taught lab sections, guiding 20+ students weekly in performing physics experiments and using Python for data analysis and visualization.

Durbin Labs Ltd: Dhaka, BD **2018 - 2019**

Educational Consultant

- Designed and taught online courses with a goal of making education accessible to students from underprivileged backgrounds.

EDUCATION

Washington University in St Louis, *Master of Arts in Physics* **2025**
Northern Illinois University, *Master of Science in Physics* **2023**
University of Dhaka, *Bachelor of Science in Physics* **2021**