

Amulya Saxena

+1 929 613 6615 | examulya@gmail.com | [linkedin.com/in/amulyasaxena](https://www.linkedin.com/in/amulyasaxena) | github.com/xlumzee | amulyasaxena.com

EXPERIENCE

Rochester Institute of Technology, Rochester, NY

Feb 2024 – May 2025

Research Engineer

- Designed and deployed an **AI driven Security Operations Center** workflow by building end to end **ETL pipelines** in python and PL/SQL to process and analyze large scale network logs and packet data
- Leveraged Spark for distributed log analysis and feature engineering, optimizing for big data scalability
- Integrated **LLMs with agentic workflows** to query GCP and detect anomalous activity, producing actionable threat intelligence
- Implemented machine learning models for threat detection, evaluated performance and monitored outcomes with visual dashboards

Data Axle, Pune, India

Jan 2022 – Jul 2022

Data Science Co-op

- Reengineered 2 data workflows to process and analyze 60 GB+ of structured/unstructured data using **deep learning** techniques, improving model performance by 20%
- Developed modular infrastructure aligned with product management practices including **CI/CD pipelines**, containerized in Docker, and GitHub Actions for automation
- Collaborated with cross-functional teams to build NLP based machine learning models boosting classification accuracy by 30%
- Created visual dashboards Tableau for C-suite executives and Stakeholders enabling **\$125,000** cost savings annually

D2K Technologies, Mumbai, India

Dec 2020 – Jan 2021

Data Analyst Intern

- Designed and maintained ETL workflows for market research data ingestion and preprocessing with 250 + websites
- Built 100 Python-based web crawlers for data mining saving **500 hours annually**

Golden Robot Animation, Mumbai, India

Apr 2019 – Jun 2019

Software Engineering Intern

- Enhanced automation of 3D modeling, rendering workflows in 2 major movie productions by creating Python scripts
- Applied PyQt and SQLite to design graphical user interfaces (GUIs) and manage databases within Autodesk Maya

PROJECTS

Optimizing Trading Strategies Using Reinforcement Learning

Jan 2024 - Apr 2025

- Used statistics, forecasting models, mathematics and analysis to build predictive modeling pipelines for the DJI and S&P 500 Index. Conducted A/B test analyses and matching experiments for different RL algorithms
- Designed and implemented a revenue management autonomous, data-driven trading system by using Deep Q Learning, Reinforce and Soft Actor Critic to give pricing signals which supersede the annual returns of the S&P by 1.5%

Temperature and Coral Bleaching – NumHack Hackathon 2024 Winner

Nov 2024 - Dec 2024

- Developed a production ready agile pipeline to forecast coral-reef bleaching from global sea-surface temperature with model accuracy of 89%
- Delivered reproducible Jupyter notebook code/environments and interactive visuals that reveal insights such as the 27 °C thermal-stress tipping point, informing conservation actions across Caribbean and Indo-Pacific reef

SKILLS

Languages: Python, SQL, R, Java, JavaScript, SAS

Tools: MySQL, Looker, Databricks, PowerBI, LangChain, AWS (Glue, S3, EC2, Lambda, SageMaker), Git, Airflow

Libraries: Pandas, NumPy, SciPy, Matplotlib, Seaborn, Scikit-learn, PyTorch, TensorFlow, Keras, NLTK, OpenCV

Certifications: AWS Certified Cloud Practitioner CLF – C02, Bloomberg Finance Fundamentals

Extra: PADI certified Technical Scuba Diver, Marathoner, Gamer, Problem Solving, Strategic Thinking

RESEARCH and EXTRACURRICULARS

Research: Co-authored a paper in fintech on **Portfolio Management and Stock Return Forecasting** using Evolving RNNs - [Link](#)

Co-authored a paper on **Explainable AI** – based security alerts and content creation recommendations in Cybersecurity - [Link](#)

Co-authored a paper on measuring security and cognitive impacts of explainability in **AI driven SOC**s - [Link](#)

Leadership: Won 2nd place in Pydata Global Numhack 2024, represented RIT at Georgetown and Cornell Hackathon 2025

EDUCATION

Rochester Institute of Technology, Rochester, NY

Aug 2022 – May 2025

Master of Science – Data Science

University of Mumbai, Mumbai, India

Dec 2020 – Apr 2022

Master of Science – Computer Science