

# MD MOSHIUR RAHMAN

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## PROFESSIONAL SUMMARY

- Computer Science graduate with strong foundations in mathematical modelling, data analysis, and engineering problem-solving. Experienced in building data-driven tools, process automation pipelines, and analytical models that translate complex real-world data into actionable engineering insights. Seeking to apply modelling, simulation, and scripting expertise to deliver engineering solutions across resources, infrastructure, and energy sectors.

## TECHNICAL SKILLS

**Languages & Scripting:** Python, SQL, Excel (VLOOKUP, PivotTables)

**Databases:** PostgreSQL, MySQL, Query Optimization

**Visualization & Reporting:** Data Visualization, Technical Documentation

**Data & Modelling:** Data Analysis, Statistical Modelling, NumPy, Pandas

**Engineering Tools:** FastAPI, Docker, Git, CI/CD, Postman

**Methodologies:** Agile, Quality Assurance, Risk Management

## PROFESSIONAL EXPERIENCE

**Junior Engineer (Data & Modelling) | SAMAHAR**

Aug 2022 - Sep 2023

Dhaka, Bangladesh

- Built and deployed mathematical models and data processing pipelines for real-world measurement and detection systems, translating engineering requirements into analytical solutions.
- Analysed large-scale project datasets (LiDAR point clouds, sensor data, image data) to extract design parameters and support operational decision-making for detection systems.
- Developed automated tools and workflows using Python, SQL, and Docker that improved data processing efficiency and reduced manual analysis time by 40%.
- Collaborated with cross-functional engineering teams to define problem requirements, design model architectures, and deliver solutions through full project lifecycle.
- Managed quality assurance, data validation, and risk assessment for all models; ensured health and safety compliance in deployed detection systems.
- Reported project status, model performance metrics, and delivery timelines to senior leads on a weekly basis.

**Engineering Intern (Analytics & Tools) | SAMAHAR**

May 2022 - July 2022

Dhaka, Bangladesh

- Developed data analytics prototypes and engineering tools using Python and SQL to solve operational challenges and streamline internal workflows.
- Evaluated technical research and implemented modelling solutions; documented processes and presented findings to engineering stakeholders.
- Supported deployment of analytical services using FastAPI and PostgreSQL; participated in code reviews and quality control processes.

## EDUCATION

**Master of Science in Computer Science**

2023 - 2025

Flinders University, Australia

**Bachelor of Science in Computer Science & Engineering**

2017 - 2022

East West University, Bangladesh

## KEY PROJECTS

**Safety-AI Analytics Dashboard** [Python | FastAPI | PostgreSQL | SQL | Docker | CI/CD | React]

- Engineered a full-stack data analytics platform for real-time threat detection; designed SQL database schemas and REST APIs for efficient data querying and reporting.

**Asset Failure Prediction** [Python | Scikit-learn | NumPy | Pandas | Mathematical Modelling | Random Forest Classifier]

- An end-to-end, two-tier machine learning pipeline predicting industrial asset failures, diagnosing root causes, and prescribing automated maintenance actions via a live Streamlit dashboard. Built with physics-based feature engineering and optimized for high class imbalance.

**3D Object Classification & Reconstruction System** [Python | TensorFlow | NumPy | Trimesh | Mathematical Modelling]

- Built a 3D data processing pipeline using deep learning and geometric modelling; transformed raw CAD data into structured point-cloud datasets for classification and analysis.

**Datathon 2.0 - Predictive Modelling Competition** [Python | Machine Learning | Statistical Analysis]

- Developed predictive models on synthetic engineering datasets; achieved 75.71% accuracy through feature engineering and model optimization techniques.