Azlan Ahmad

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Education

University of Western Ontario May 2026
Candidate for Bachelor of Science in Data Science and Software Engineering *GPA: 3.9/4.0*

- Awards: Western Scholarship of Distinction, Dean's Honor List, AWS Cloud Practitioner (CLF-C02), Microsoft Azure Fundamentals (AZ-900)

Technical Skills

Languages: Python, SQL, R, C, C++, Java, JavaScript, TypeScript, Node.js, Kotlin
Libraries/Frameworks: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, MLFlow, React.js, Flask, Tailwind CSS
Developer Tools/Cloud: Apache Spark, Git, AWS, Azure, GCP, PostgreSQL, MySQL, Tableau, PowerBI, MS Excel

Experience

Data Science Intern September 2024 – Present
Bruce Power *Tiverton, ON*

- Increased accuracy of predictive models by **20%** by developing a **Pandas-based** feature engineering pipeline, applying **domain transformations** such as rolling statistics, and polynomial expansion to improve performance.
- Automated data merging from multiple sources **(APIs, CSVs, SQL databases)**, reducing manual integration by **60%**, using **merge(), join(), and concat() functions.**
- Optimized nuclear reactor cooling efficiency by **15%** by conducting **A/B testing** on different predictive maintenance models, using **Pandas** and **SciPy** to analyze statistical significance (t-tests, chi-square tests) and compare model performance based on historical reactor failure data.
- Increased the speed of data ingestion and integration by **35%** by optimizing Pandas read csv, and read sql, reducing the time required to load and process large-scale neuroimaging and nuclear performance datasets from sources

Data Engineering and Business Intelligence Intern May 2024 – August 2024
Dartmouth College *Hanover, NH*

- Achieved high data processing efficiency, as measured by reducing **ETL** processing time **by 30%,** by designing and developing batch and real-time data pipelines using **Java** and **Apache Spark**.
- Facilitated a seamless transition to cloud infrastructure, as measured by a **50% reduction** in on-premises infrastructure costs, by shifting data storage and processing to **GCP** tools such as **BigQuery and Dataflow.**
- Built a **data warehouse** on **AWS Redshift**, integrating multiple data sources, which improved **query performance** by **40%** and enabled **real-time** business intelligence reporting.

Machine Learning Engineer Intern January 2024 – April 2024
University of Toronto *Toronto, ON*

- Developed **neural network models** to analyze and predict sleep patterns using data from wearable devices and mobile health applications, resulting in a **25% improvement in sleep detection accuracy.**
- Conducted a comparative analysis of **SVM, Random Forest, and CNN** for sleep stage classification, achieving a **92% accuracy with CNN.** This resulted in a **15% performance improvement** over the baseline.
- Designed and developed dynamic **Tableau and Power BI** dashboards, enabling **real-time** visualization of key business metrics, which enhanced decision-making efficiency and reduced reporting time by **20%**.
- Automated **preprocessing** of a **10GB dataset** using Python, employing techniques like **outlier detection**, **missing value imputation**, and **feature scaling**, which **reduced** model training time by **25%**.

Data Science Intern May 2023 – April 2024
University of Western Ontario *London, ON*

- Developed a **Generative Adversarial Networks** model using **Tensorflow** and **PyTorch** to generate detailed images of MRI Scans gathered from experimental data with an accuracy rate of **85%**.
- Optimized the performance of a multi-terabyte research database, which reduces the data retrieval time by approximately **40%**, by administering frequent checks and updates on **SQL** and **NoSQL** systems.
- Optimized **data pipelines** by writing Python scripts to automate data ingestion from **APIs**, **reducing** manual intervention by **35%** and improving data freshness.