Bryan Lee

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Education

University of Minnesota, Twin Cities — Minneapolis, MN
Bachelor of Science in Computer Science, CGPA: 3.85/4.00 — *Aug. 2022 – May 2025*
Coursework: Data Structures & Algorithms, Database Design, Software Eng., Operating Systems, Program Design & Development

Skills

Languages: Python, Scala, SQL, Java, C#, C++, C, JavaScript, TypeScript , IDL, HTML/CSS, OCaml
Frameworks: React Native, React.js, Django, ASP.NET, Flask
Developer Tools: Apache Airflow, Apache Spark (PySpark), Apache Hadoop, Kubernetes, DBT, MySQL, PostgreSQL, Preset, Postman, Docker, Git, AWS (Amazon Web Services: MWAA, S3, Redshift, EMR, Bedrock), GCP (Google Cloud Platform: Big Query, Looker Studio)

Relevant Experience

BFC Software Inc. — May 2024 – Present
Data Engineer & Analytics Intern — *Minneapolis, MN*
- Designed & deployed ETL data pipelines using **Apache Airflow**, **Amazon Web Service (AWS)**, **PostgreSQL**, & **Python** to integrate and process inventory data from 20+ data warehouses, reducing data processing time by approximately **2 hours per day**.
- Implemented real-time monitoring and anomaly detection for data pipelines using **Metaplane**, leveraging automated data lineage, schema change detection, and alerting to maintain pipeline integrity and minimize failures.
- Utilized **AWS Elastic MapReduce (EMR)** & **Apache Spark** to optimize large-scale data processing through data partitioning for front-end reporting, achieving an increasing **30%** performance for advanced inventory analytics.
- Built and deployed analytical data models in **Data Build Tool (DBT)**, enhancing data accuracy for customer inventory insights in interactive dashboards built in **Preset** & **React Native**
- Automated the categorization of food items compliant with FSMA standards to enhance traceability & reduce contamination.

University of Minnesota - School of Physics and Astronomy — Feb 2023 – Present
Software Developer, Astrophysics Undergraduate Research Assistant — *Minneapolis, MN*
- Led an interdisciplinary team to develop and deploy a **React.js** web application using **Docker** that facilitates real-time computation of spectral statistics and dynamic graph generation, enhancing research efficiency by **54%**
- Modernized and revamped data infrastructure of collected orbit data from NASA's Fast Auroral SnapshoT Explorer (FAST) satellite, automating the migration of **120+ million rows** into a **MySQL** database and increasing data access speed by **82%**.

University of Minnesota - Distributed Computing Systems Group (DCSG) — March 2024 – Present
Undergraduate Research Assistant — *Minneapolis, MN*
- Contributed to research and development on Electrocardiogram (ECG) compression algorithms for pacemakers for enhanced cardiac monitoring capabilities, achieving a **23%** reduction in data transmission size.
- Developed an ECG data management system in **Python** using pandas and numpy, reducing ECG data processing time by **24%** and increasing analysis efficiency by **43%**.

Genus Technologies Inc. — May 2024 - August 2024
Solutions Analyst Intern — *Minneapolis, MN*
- Reduced code redundancy by **36%** using Object-Oriented Principles to revamp legacy systems with **C#** & **VB.NET**.
- Refactored codebases to increase robustness and collaborated with cross-functional teams, leading to a cost saving of **$7,000** through seamless integration and deployment.

Keysight Technologies — May 2023 – August 2023
Software Development Engineer Intern — *Penang, Malaysia*
- Led the end-to-end development of a web application using **C#** and **ASP.NET** to automate inventory tracking and provide real-time inventory insights for production managers, reducing inventory discrepancies by approximately **33%**.
- Enhanced operational efficiency in production lines by **42%** by centralizing inventory data into a **SQL Server** using **C#**.

Projects

AIMSES | *React.js, TypeScript, Python, Docker, MySQL, Node.js, Express.js* — September 2023 – Present
- Developed **React.js** web app for computing spectral statistics and generating dynamic graphs for magnetospheric research
- Streamlined deployment process using **Docker**, for enhanced accessibility across research environments.

Uber Analytics Dashboard | *Python, SQL, Mage, Google Cloud Platforms (GCP)* — April 2023 – May 2023
- Developed end-to-end **ETL** analytics solution using **Mage** & **GCP BigQuery** for ride data retrieval and analysis
- Leveraged **GCP BigQuery** as a data warehouse for efficient data ingestion, transformation, & **Looker Studio** for data visualization