

Jeffrey Chan

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PROFESSIONAL EXPERIENCE

Specialist Data Engineer | December 2023 -
Canadian National Railway

OBSERVABILITY and DISASTER RECOVERY

- Architected and deployed a **Databricks** observability solution that identified and delivered significant cost savings by optimizing compute resource utilization while improving pipeline performance and resiliency.
- Engineered a robust **disaster recovery** framework, securing critical railway data and minimizing downtime by establishing clear execution procedures and documentation for operations teams.

DATA PIPELINING

- Designed and implemented robust data pipelines, ingesting data from sources like **Apache Kafka** to provision a secure, analytics-ready data lakehouse that serves the business's critical data needs.
- Served as a technical leader, mentoring junior team members on core data engineering principles and overseeing their projects from ideation to successful production deployment.

Relevant Skills: Azure, Databricks, Apache Spark, Python, Kafka, SQL, Scala, GCP

Data Engineer | October 2022 – November 2023
Compass Analytics

REAL-TIME ANALYTICS

- Streamlined and optimized complex data ingestion workflows, utilizing **Python** to improve data quality and consistency within data lakes and warehouses for critical business analytics.
- Designed and implemented a resilient and scalable data pipeline architecture, leveraging a modern data stack (**SQL**, **Python**, **Databricks**, **Apache Spark**) to enable real-time analytics and drive data-driven decision-making.

DATA INGESTION ENGINE

- Orchestrated a robust data ingestion system on **AWS** that processed and stored over **50 documents per minute** into S3, enabling rapid reporting and business analytics.
- Collaborated directly with stakeholders to conceptualize and craft cloud architecture designs on AWS, shaping the technical foundation for new data initiatives.

Relevant Skills: Amazon Web Services (AWS), Solution Architecture, Python, Databricks, Apache Spark, Snowflake

CERTIFICATIONS, DESIGNATIONS & CLEARANCES

Databricks Data Engineer Professional | December 2024

Databricks Inc.

Databricks Data Engineer Associate | December 2024

Databricks Inc.

Databricks Lakehouse Fundamentals | January 2023

Databricks Inc.

AWS Certified Cloud Practitioner | November 2022

Amazon Web Services

SKILLS & TOOLS

Python, SQL, PySpark, Azure, Databricks, Apache Spark, Kafka, AWS, GCP, Snowflake, Scala, Pandas, NumPy, Git

EDUCATION

Bachelor of Engineering – Software Engineering C-Edge

Concordia University - Gina Cody School of Engineering, Montreal, QC - Canada

GPA: 3.57

Relevant Courses: Machine Learning, Big Data Analytics, Artificial Intelligence, Data Structures and Algorithms

COMMUNITY/PROFESSIONAL ACTIVITIES

Case Competition Judge | September 2022 - Present
Engineering and Commerce Case Competition

- Provide feedback to students on innovative engineering and business solutions to industry challenges
- Review and critique student solutions leveraging expertise in engineering and design

Executive Vice-President | April 2021 - May 2022
Engineering and Commerce Case Competition

- Led a 20-person team to accomplish their mandates
- Handled operational tasks such as setting deadlines and overseeing department progress
- Oversaw a weeklong international engineering and business case competition

PROJECTS

Formula 1 Analytics

- Develop code that streamed real-time car telemetry
- Create dashboards and analysis tools from streamed data

Relevant Skills: *Python, Data Networking, Databricks, AWS*

Capstone

- Engineered a data viewing platform for DICOM files, utilizing Azure Table Storage to improve workflow responsiveness by over 6000% (reducing load times from 70 seconds to 1.5 milliseconds).

Relevant Skills: *Database Design, C#, Backend Development, Azure*

Course Recommendation System

- Completed for Big Data Analytics ingesting data and extracting keywords in Excel containing course descriptions
- Applied recommendation models to provide suggestions based on student ratings and course similarity

Relevant Skills: *PySpark, Data Engineering, Machine Learning, Python, Excel*

ADDITIONAL INFORMATION

English (Native), French (Spoken, Written) | Cantonese (Spoken)