

Jeffrey Chan

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PROFESSIONAL EXPERIENCE

Data Engineer | January 2024 - Compass Analytics

As a Data Engineer, I built scalable cloud architecture, deployed it onto AWS, developed data pipelines for consumption primarily using Python, Spark, SQL and Databricks, and create data visualizations using dashboards.

OBSERVABILITY

- Determining areas for cost reduction, maintaining performance and resiliency of pipelines within **Databricks**.
- Develop the **business continuity** codebase and procedure for critical railway services.

DATA PIPELINING

- Construct data pipelines securing and landing data from **Apache Kafka** into the data lake.
- Led discussions on best data engineering practices by applying software engineering techniques.

Relevant Skills: *Azure, Databricks, Apache Spark, Python, Kafka, GCP, Informatica*

Data Engineer | October 2022 – November 2023 Compass Analytics

As a Data Engineer, I built scalable cloud architecture, deployed it onto AWS, developed data pipelines for consumption primarily using Python, Spark, SQL and Databricks, and create data visualizations using dashboards.

REAL-TIME ANALYTICS

- Developed and optimized **Python** code to capture and assemble data into Data Lakes and Data Warehouses to support operational reporting, data science and self-service analytics
- Create and maintain optimal and scalable data pipeline architecture using **SQL, Python, Databricks, Spark**

DATA INGESTION ENGINE

- Integrated a data ingest system for extracting and storing **25 documents per 30 seconds** into **AWS S3**
- Generated **AWS cloud architecture** designs according to stakeholder plans and requirements

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

Data Engineering Developer | May 2021 - August 2021 Intact Financial Corporation

In this role, I translated business demands into technical requirements for the incoming Snowflake database, ensuring data quality using the Erwin Data Catalog and minimizing costly reconfigurations.

DATA SYSTEM DESIGN

- Documented conceptual, logical, and physical data models using the **Erwin Data Catalog**
- Built source to target mapping documents to describe data transformations for the **Snowflake** system

DATABASE MIGRATION

- Migrated a legacy database to meet new requirements, resulting in monthly **cost savings of over \$15,000**

Relevant Skills: *Python, SQL Server databases, Data Analysis, Erwin Data Catalogue, Snowflake*

Business Intelligence Developer | January 2021 - April 2021 McGill University

As a developer, I developed SQL scripts to automate maintenance tasks on existing Oracle database servers, eliminating costly and time-consuming manual interventions for large databases.

DATA EXTRACTION AND ANALYTICS

- Extracted requirements, developed, and tested code, **saving over 20 hours monthly** for database administrators
- Automated business reports and **Oracle** database health reports using **PowerBI** and **SSRS**

Relevant Skills: *SQL Server databases, Software Development and Analysis*

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

EDUCATION

Bachelor of Engineering – Software Engineering C-Edge

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

- GPA: 3.57
 - Member of the Institute for Co-Operative Education
 - Student Leadership: Executive Vice-President, Engineering and Commerce Case Competition
- Relevant Courses:** *Machine Learning, Big Data Analytics, Artificial Intelligence, Data Structures and Algorithms*

SKILLS & TOOLS

Cloud Services & Tools: Amazon Web Services, Databricks, Excel, Word, PowerPoint

Languages: Python, Java, SQL, MongoDB, JavaScript, HTML, CSS, Git

Packages & Libraries: scikit-learn, NumPy, PySpark, pandas, NLTK, TensorFlow, BeautifulSoup, PyTorch

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

- Developed a data viewing platform for DICOM files improving the workflow of data scientists.
- Improved responsiveness by over **6000% (70 seconds to 1.5 milliseconds)** using Azure Table Storage

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)