

# JEFFREY CHAK-HIM CHAN

LinkedIn: [jeffrey-chak-him-chan](#) | 514-625-6619 | [chan.jch19@gmail.com](mailto:chan.jch19@gmail.com)

GitHub: [github.com/JeffreyCHChan/JeffreyChan](https://github.com/JeffreyCHChan/JeffreyChan) | Website: [www.jeffreychchan.com](http://www.jeffreychchan.com)

## PROFESSIONAL EXPERIENCE

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### Junior Data Engineer

December 2022 -

Compass Analytics. Montreal, QC - Canada

As a Data Engineer, I develop the **data ingestion** engine from the ground up using web scraping libraries, design scalable **cloud architecture**, deploy it onto AWS, and develop thorough **data pipelines** for consumption.

#### DATA INGESTION ENGINE

- Prototype a system to ingest raw online data by extracting and storing approximately **25 documents per 30 seconds** into data pipelines used by business analysts and data scientists
- Generate architecture designs for current and future plans of stakeholders

#### DATA PIPELINES

- Produce a script that improves data quality through data filtering and transformations, completing within **5 minutes**
- Create various transformation layers to address business demands and questions

**Relevant Skills:** Amazon Web Services (AWS), Solution Architecture, Python, Big Data Analytics

### Data Engineering Intern

May 2021 - August 2021

Intact Financial Corporation. Montreal, QC - Canada

In this role, I translated business demands into technical requirements for the target database systems, ensuring consistent data quality using **Erwin Data Catalog** to minimize costly reconfigurations. Collaborated with data engineers to manipulate existing data structures and file formats to align with **Snowflake** data types.

#### DATABASE MIGRATION

- Assisted in migrating the legacy database to meet the input requirements of the insurance pricing engine, resulting in monthly operating **cost savings of over \$15,000** for the company

#### DATA SYSTEM DESIGN

- Analyzed the capabilities of the existing data system, explored potential systems based on new requirements, and proposed suitable solutions

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

### Business Intelligence Developer

January 2021 - April 2021

McGill University. Montreal, QC - Canada

As a developer, I identified the software requirements and 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, coded, and tested new software, resulting in **saving over 20 hours monthly** for database administrators
- Generated business and database health reports using Power BI and SSRS

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

## EDUCATION

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### 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

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**Cloud Services:** Amazon Web Services

**Languages:** Python (Intermediate), Java, SQL, MongoDB, JavaScript, HTML, CSS, Git

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

## CERTIFICATIONS, DESIGNATIONS & CLEARANCES

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### Databricks Lakehouse Fundamentals

January 2023

Databricks Inc.

### AWS Certified Cloud Practitioner

November 2022

Amazon Web Services

### Python

August 2019

Testdome

## COMMUNITY/PROFESSIONAL ACTIVITIES

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### Case Competition Judge

September 2022 - Present

Engineering and Commerce Case Competition, Montreal, QC - Canada

- 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, Montreal, QC - Canada

- Led a team of Vice-Presidents to accomplish their departmental goals
- Executed administrative tasks to support the President with their mandate and tasks
- Handled operational tasks such as setting deadlines, overseeing department progress, and organizing meetings
- Oversaw a weeklong international engineering and business case competition

### Vice-President, Technology

July 2020 - April 2021

Engineering and Commerce Case Competition, Montreal, QC - Canada

- Led the transition to an online case competition platform during the COVID-19 pandemic
- Administered technical support promptly during the online case competition
- Supervised and organized communication systems on platforms
- Trained team members by creating written instructions and media

## PROJECTS

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### Capstone

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

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

### Course Recommendation System

- Completed for Big Data Analytics (SOEN471) the project ingest data from Concordia's Open Data platform to extract keywords from course descriptions
- Applied Content-Based and Collaborative Filtering Models to provide suggestions based on student ratings and course similarity.

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

## ADDITIONAL INFORMATION

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