Paul McDonald

Contact Information Calgary, AB Canada

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LANGUAGES

Python, Java, JavaScript, C#, C++

Professional EXPERIENCE

Software Engineering Intern

05.2020 - 08.2020

Calgary, AB

• Implemented video streaming using Jitsi for a commercial online learning platform.

- Worked remotely as part of an agile development team using Git/GitHub management tools.
- Developed responsive user interfaces using **React/Typescript** to extend **JupyterLab**.
- Utilized **HTML** and **CSS** to establish clean, modern webpages.
- Constructed **Django** REST API models and endpoints to facilitate front end requirements.

Content Development Teaching Assistant

07.2020 - 09.2020



University of Calgary

Calgary, AB

• Produced comprehensive, introductory Python programming coursework for over 800 first year engineering students. Including beginner-friendly Git resources for new programmers.

Project Engineering Intern

05.2017 - 05.2018

Syncrude Canada Ltd.

Calgary, AB

Svecrude

- Developed estimates for multimillion dollar projects using industry benchmarking techniques.
- Established scope of pipeline replacement for various processing plants.
- Interpreted probable causes for accelerated corrosion cases.

EDUCATION

MSc in Software Engineering

2019 - Present

University of Calgary

Calgary, AB

• GPA: 4.0

• Coursework: Object Oriented Software Engineering, Data Engineering, Data Structures and Algorithms, Database Design, Large Scale Data Analytics Systems (Big Data), Machine Learning, Data Mining, Dependability and Reliability of Software Systems (Testing), Software Requirement Analysis, Software Design and Architecture with SOLID Principles, Innovation and Entrepreneurship



BSc in Mechanical Engineering

2014 - 2019

University of Saskatchewan

• Average: 81%

Saskatoon, SK

PROJECTS

Unity 3D Video Game

2019-Present

- Project manager and collaborative C# developer for a cooperative dungeon crawler game created using the Unity Game Engine.
- Implemented game mechanics, management systems, and user interfaces employing popular design patterns from the book "Game Programming Patterns".
- In addition to programming, contributed to game design, art, and sound design.

Client-Server TicTacToe Game

2020

- Created a TicTacToe game in **Java** with a client-server, MVC architecture.
- When hosted on **AWS**, allows multiple users to face off in the ancient art of TicTacToe.

TECHNICAL SKILLS

Specialties: Object Oriented Software Development, Web Application Development, Data Engineering, Machine Learning, Game Development

Technologies: React, Django, SQL, Git, Postman, AWS, Scikit-learn, TensorFlow, Pandas, NumPy, BeautifulSoup, Minesweeper, Apache Spark, Hadoop, Unity (Game Engine), Figma, HTML, CSS, LaTeX, Markdown