

## Technical Skills

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**Languages:** (500+ Hrs): JavaScript, C#, Python (100+ Hrs): C++, SQL, Java

**Tools:** Unity, Git, AWS

**Frameworks/ Libraries:** React, Vue, Ruby on Rails, jQuery, Pandas, Numpy, Matplotlib, ImageAI

## Work Experience

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### Full Stack Software Engineering, Intern

May 2021 – Aug. 2021

*Pixlee TurnTo*

Toronto, ON

- Proficiently delivered priority features for the main web application using **JavaScript and Ruby on Rails** resulting in **higher customer retention and new sales**
- Developed the frontend of a product recommendation system which won third place in a company-wide hackathon enabling the potential for future feature implementation
- Maintained unit and feature tests through **leveraging Jest and RSpec testing frameworks**
- Led sprint development for a product review feature by creating/ sizing tasks and assigning based on priority

### Full Stack Software Developer, Intern

Sep. 2020 – Dec. 2020

*Finastra/Doorr*

Toronto, ON

- Implemented several features for a mortgage web application **following AWS serverless architecture principles**
- **Leveraged Vue and JavaScript** to refactor and improve frontend navigation for a better user experience
- Created a mortgage application JSON object generator to test application validation in the backend
- Designed a frontend system for managing subscription services at both a user and sitewide level

### Data Analyst, Intern

Jan. 2020 – Apr. 2020

*Loblaw Companies Limited*

Brampton, ON

- Gained familiarity with Python, Numpy, and Pandas in less than two weeks to aid in the development of mathematical models that **predict transactional behaviour of over 10,000 customers**
- Optimized data aggregation/filtering time **from 1 hr to 30 mins** with efficient SQL queries/data management
- Created several data visualizations with Matplotlib and presented data findings in a coherent manner
- Analyzed customer transaction data using different statistical methods such as hypothesis testing

## Projects

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**Personal Website:** <https://adrianlamcw.github.io> (includes links to all projects)

### Game: Profits per Parsec (C#, Unity)

- Developed a grand strategy game aimed at managing a futuristic rocket business in the solar system
- Implemented a physical solar system model with planet and moon rotation and basic orbiting
- Developed **rocket pathfinding with object avoidance in 3D space** using vectors for optimal space travel
- Designed several UI elements including a research system with initial costs for proper progression scaling

### Image Recognition Web App: Just Your Feedback (Python, ImageAI)

- Won the Hack the North SurveyMonkey API challenge for the best and **most creative usage of their API**
- Led the team to create a machine learning image recognition model with ImageAI in Python to recognize hand gestures as input and automatically generate a response to a survey

### Discord Chat Bot: Debt-Collector Discord Bot (JavaScript, Discord API, AWS, SQL)

- Created a discord bot that keeps track of outstanding debts between users by command input
- Used an AWS RDS MySQL database to store debt data and discord.js plus node to interact with the Discord API

### Game: Estate (C++, Allegro)

- Created a real time strategy game with resource/unit management similar to Age of Empires 2
- Implemented 2D isometric image rendering order and optimal unit spawn mechanics

## Education

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### University of Waterloo

Sep. 2018 – 2023

- Candidate for Bachelor of Applied Science, Mechatronics Engineering

**Relevant Courses** - Algorithm and Data Structures/ Computer Structures and Real-Time Systems