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EDUCATION

University of Calgary - *Bachelor of Science in Computer Science and Biological Science*

Senshu University - *Japanese Exchange program from 2018-2019*

GPA in Computer Science: 3.67

SKILLS

Languages: Java, C, C++, Haskell, Python, Go, SQL, Javascript(Vue, Angular), PHP **Technologies**: Git, Linux

WORK EXPERIENCE

Student Enrollment System - *University of Calgary*

August 2022 - CURRENT

- Modifying web-enabled, group-scheduling system for University of Calgary, allowing students to view and print schedules for current and future semesters using **PHP** and **C#**.
- Innovated time-saving, robust data-intake system that automates and modifies databases using **MySQL**.

Computer Science teacher assistant (CPSC 413: Design and Analysis of Algorithms I) - *University of Calgary*

August 2022 - CURRENT

- Partnered with professors to deliver a range of teaching and assessment activities including tutorials directed towards the subject of design and analysis of algorithms at undergraduate level.
- Course content includes techniques for the analysis of algorithms (greedy methods, divide and conquer, dynamic programming), including counting, summation, recurrences, and asymptotic relations.

PROJECTS

EcommerceWebApplication - *https://github.com/zacharykoo/EcommerceWebApp*

January 2022 - May 2022

- Created backend database management using GORM, repository and query using SQLite. API handlers and services for the E-commerce application are created in **Golang**
- Established frontend connection with API GET, SET and POST requests using **Angular**

DistributedSystem - *https://github.com/zacharykoo/DistributedSystem*

February 2022 - May 2022

- Peer-to-Peer Distributed system created using B-multicast algorithm which contains a peer process and a registry process in **Java**
- Implemented system communications using paradigms, including fault tolerance and coordination with timed systems paired with ACKs
- Connection is established by UDP Datagram socket and can handle a minimum of 121 users request concurrently with at most 7.76 ms delay

Self-checkout software - *https://github.com/zacharykoo/selfcheckoutProject*

January 2022 - April 2022

- Self-Checkout System handles items in database by using PLU code or scanning Barcode paired with respective observers
- Each component of the software is tested and has 100% unit test coverage to ensure the application is functionally implemented using **Java**

NotScribbl.io, “Nightowl Studios” - *real time drawing guessing game https://github.com/nightowl-studios/arcade*

June 2020 - December 2020

- Backend websocket connection and API service implemented using Gorilla, drawing tool canvas with event handlers implemented in **Golang**
- Web client, frontend communication with general UI were designed in **VueJS**

EXTRACURRICULAR ACTIVITIES:

Competitions:

- Alberta Collegiate Programming Contest - 12th (2020)
- Calgary Collegiate Programming Contest - 6th (2021)
- Member of University of Calgary Competitive Programming Club (2020-PRESENT)

Languages:

- Japanese (N2) language test (2019)