Sydney Kwok

Education

Bachelor of Science, Computer Science, 4.0 GPA
University of Calgary - Calgary, AB
2018 - present

Dean's List student from 2018 - present.

Projects

Hospital Management System
https://bit.ly/341ZwR0

Developed a system that maintains a database of patient records, staff work schedules and clinical appointments.

- Designed a GUI to manage the interactions and access control between Administration, Assistant, Doctor, Nurse and Patient users.
- Used JSON file I/O for database management.
- Employed agile development methods (Scrum) in software development.
- Experienced a switch to remote work and communication in light of the COVID-19 pandemic.

Simple Pacman
https://bit.ly/30hIzAV

Worked as a team to create a Pacman game in Java.

- Created UML class diagrams to conceptually model the structure of the application.
- Animated character movements & created simple AI for ghost characters.
- Used file I/O to allow player to save the state of their game so that it could be reloaded at a later time.
- Performed unit testing through JUnit test case creation.

Secure File Transfer With Prior Key Agreement
https://bit.ly/36fT4sg

Implemented a basic TLS handshake, assuming the Client and Server have negotiated SRP-SHA3-256-RSA-AES-256-CBC-SHA3-256 as the TLS cipher suite.

- Implemented my own version of the RSA parameter/key generation, encryption, decryption, signature generation and verification.
- Worked meticulously, reading many pages of problem specifications, in order to perfectly satisfy the finicky program autograders.

Contact Details

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LinkedIn: https://bit.ly/2G1aApI

Technical Skills

Languages: Java, C / C++, Python, ARM Assembly, HTML / CSS, Haskell

Tools & Environments: Windows, Linux / UNIX, Eclipse IDE, MS Visual Studio Code, GitHub / Git Bash, JUnit Testing

Relevant Coursework

Design and Analysis of Algorithms

Principles of Operating Systems

Data Structures, Algorithms and Their Analysis

Introduction to Computability

Computing Machinery I & II

Programming Paradigms

Human-Computer Interaction I

Introduction to Software Engineering

Introduction to Cryptography

Explorations in Information Security and Privacy