

# SIMENG YANG

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## SKILL SET

**Languages:** Java, C / C++, JavaScript (ES6), Python, PHP, HTML/CSS  
**Technologies:** Git, SQL, Node, Flask, React, Redux, Android, OpenCV, Valgrind  
**Infrastructure:** Docker, Vagrant, AWS, Bash, Zsh, Vim, tmux

## EXPERIENCE

**SnapTravel** Software Engineer Intern, Toronto Sep '18 - present

- Building a loyalty rewards Flask microservice for allocating redeemable credits to business travelers
- Creating an internal tools utility for managing and expiring credits
- Implemented a PDF library in Python to generate and upload customer-facing vouchers and invoices
- Collaborated with product-management team to redesign new booking confirmation and cancellation emails

**Novus Health** Software Engineer Intern, Toronto Jan '18 - Apr '18

- Designed and implemented a dashboard for health assessments using React, decreasing turnaround for publishing campaigns from hours to minutes
- Composed and automated data import tools in PHP and SQL, significantly reducing time to update records
- Created numerous REST APIs and refactored deprecated APIs for customer products and internal tools

**Genesys** Software Developer Intern, Markham Apr '17 - Aug '17

- Built and deployed a media control suite for audio recording and playback in C++, serving hundreds of call transmissions daily on the principle voice platform
- Extended support for next-generation Opus audio codec, boosting sound quality by up to 50%
- Updated a build status report system in Python, accelerating team development for pushed builds
- Verified packet transmission integrity and throughput with Wireshark and network simulation libraries

## PROJECTS

**3D Dogfighter** 🏆 Winner at Waterloo Game Jam '17

- Developed a multi-player aerial combat game in C# with Unity; awarded "Most Over-the-Top" prize
- Integrated server networking logic with match-making system for hosting 20+ concurrent users
- Designed combat and flight mechanics, user interface and 3D terrain for maps

**Student Management System** 🏆

- Implemented a secure database to manage 1,000+ student records using LAMP Stack
- Designed robust input sanitation and validation using error-handlers and regular expressions in PHP

**Re-Vim'd** 🏆

- Programmed a lightweight clone of the classic Vim editor in C++ based on MVC architecture
- Replicated 40+ supported commands and enhancements, such as syntax-highlighting, multiple tabs and linear history

**WLP4 Compiler**

- Compiled WLP4 language into MIPS Assembly using an LR(1) parser
- Detected syntax, semantic, and lexicographic errors with context-sensitive analysis
- Supported nested functions, pointer allocation, linkers and loaders, and automatic garbage collection

## EDUCATION

**BCS Computer Science, University of Waterloo** Sep '16 - Apr '21 (Expected)

- Intended Minor in Statistics
- Received Faculty of Engineering Entrance Scholarship, President's Scholarship of Distinction (95+%)