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+%)