Piotr Pietrzyk

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EDUCATION

Illinois Institute of Technology AUG 2020 - MAY 2024
Bachelor of Science in Computer Science, Minor in Applied Mathematics 3.41 GPA

SKILLS

Windows | MacOS | Linux | Shell Scripting | Back-end Web Development | Firebase | AWS | C | C++ | C# | Java | Rust | JavaScript | Python | SQL | R | x86 Assembly | HTML | BlueJ | Eclipse | Visual Studio Code | Android Studio | RStudio | PyCharm | Vim | Object Oriented Programming | Functional Programming | Android App Development | Git | Angular | React | OpenGL | WebGL

EXPERIENCE

Undergraduate Research Assistant JAN 2024 - MAY 2024
Illinois Institute of Technology Chicago, IL

- Collaborated with two peers on an independent research project under professor supervision
- Researched high-performance serverless computing, focusing on RDMA-enabled Functions as a Service (rFaaS)
- Explored the rFaaS paradigm, enabling isolated, stateless virtual machine functions with dynamic scheduling and disposal
- Analyzed and benchmarked performance metrics for virtual machine function startups, including cold, warm, and hot invocations

IT Helpdesk Intern APR 2022 - AUG 2022
Walsh Group Chicago, IL

- Developed a PowerShell script to automate the backup and remote upload of employee laptop files
- Updated and maintained documentation for company processes, including phone setup and troubleshooting
- Collaborated with another intern to create an inventory tracking system with color coordination and accurate phone model counts
- Provided remote technical support to employees nationwide, including phone troubleshooting, profile setup, laptop configuration, and database access

PROJECTS

Lemon Mobile Application

- Prototyped a mobile application for a business course project involving business proposal development
- Utilized Android Studio to develop the app, implementing logic with Java and front-end design with HTML, CSS, and JavaScript
- Integrated a database for storing user login information
- Implemented Google Maps integration to enable users to locate nearby e-scooters for rental
- Developed a QR-code scanner to transfer e-scooter information to users' phones

Chip8 Emulator

- Developed a Chip8 emulator in C++ for the COSMAC VIP, a 1970s microcomputer
- Implemented a 12-bit program counter, 4KB of memory, sixteen 8-bit registers, a sixteen-level stack, and additional features to accurately emulate the original system
- Coded 34 opcodes for fetching, decoding, and executing instructions to run various programs
- Utilized the SDL2 library to render graphics and produce sound
- Incorporated system quirks to ensure faithful emulation of the COSMAC VIP