Peter Ye

✉ p2ye@uwaterloo.ca   ⭘ yaxollum   in peter-ye-cs   🌐 peterye.ca

Skills

- **Languages:** C++, Python, Rust, Java, C#, HTML, CSS, JavaScript, TypeScript
- **Technologies:** Git, Linux, Bash, Docker, Nginx

Experience

Xonsh: a Python-based command line shell (⭘ [xonsh/xonsh](#))
- Identified and fixed complex I/O and multiprocessing issues by tracing system calls and inspecting the shell's runtime state using a debugger
- Updated the shell's command parser to add new syntax features and fix parsing bugs
- Developed unit tests using the Pytest framework
- Contributed 30+ pull requests, documenting all changes in the project's release notes
Technologies used: Python, Pytest, `strace`, PDB

Projects

Diagonator: a time management system (⭘ [yaxollum/diagonator](#))
- Developed a cross-platform time management system that reminds computer users to take breaks by drawing lines across their screen
- Built a Pomodoro timer and a checklist that guides a user through their daily routine
- Created a status bar widget, a collection of keyboard shortcuts, and a command-line interface, which all connect to the time management system using WebSockets
Technologies used: Rust, Socket.IO, `tokio`, axum; C, X11; C#, WPF

CHIPedda: a CHIP-8 emulator, disassembler, and assembler (⭘ [yaxollum/CHIPedda](#))
- Built an emulator that can run programs written for the CHIP-8 platform
- Implemented a disassembler and an assembler that convert programs from binary into assembly language, and vice versa
Technologies used: C++, CMake

Scrape: a command line Scratch interpreter (⭘ [scraterpreter/scrape](#))
- Developed a Scratch interpreter that runs in the command line
- Leveraged object-oriented design patterns to implement various language features
- Decoded Scatch's `.sb3` file format to construct an abstract syntax tree
Technologies used: C++, CMake, JSON

Education

University of Waterloo   Sep 2023 - present
Bachelor of Computer Science
3.92 GPA / 94.8% cumulative average