

Hunter Rick

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EDUCATION

Chico State University

Bachelor of Science in Computer Science

Chico, CA

Aug. 2019 – Dec. 2022

VOLUNTEER EXPERIENCE

Open-source code contribution to Roc Toolkit | C++, API, VirtualBox, real-time, Git

November 2023

- Programmed a dynamic print statement utilizing CLI argument inputs to show list of supported audio interfaces and their corresponding audio protocols
- Followed Continuous Integration and Development (CI/CD) guidelines with the use of GitHub Actions
- Adhere to coding contribution guidelines by running linters, unit tests, and build scripts correctly
- Studied documentation for 150,000+ lines of code base and documented my code changes with Doxygen

PROJECTS

DES 56-bit Key Cracker with Parallel Computing | C, mpi, nanoPI, SSH

February 2022 – June 2022

- Implemented a brute force solution in c with parallel processing to cracking a 56-bit des key to decrypt a text file
- Used 240 cores from two clusters of 30 4-core nanopi's with the mpi library
- Compared runtime speed for linear and parallel solutions at different bit lengths for both worst and best case scenarios
- Predicted and compared theoretical speed increase to real speed increase of runtime with Gustafson's law

HTTP Server hosted Keylogger | C, mpi, nanoPI, SSH, Fedora Linux

February 2022 – June 2022

- A white hat hacking keylogger application to expose vulnerabilities in a personal routers security
- Reports text logs of the victim's keystrokes to the hackers desktop via a secretly hosted http server built from a python script with socket programming
- Makes use of selenium's browser automation in headless mode to secretly login to a victim's router and create a port forward to allow for http server hosting

Personal Portfolio Web App | React, Vite, Vercel, JavaScript, CSS, HTML

September 2023 – Present

- Hosted on Vercel at hunterrick.com with custom domain name using Record DNS and deployment of a remote GitHub repository
- Utilized JavaScript to enable real-time interactivity of scrolling links, and contact forms
- CSS styling that allows for consistent sizing on all desktop veiwport sizes

Pathfinder 2e Initiative Tracker | C++, fastjson, Bash, GNU Make

January 2023 – Present

- Developed an offline app that handles the initiative rules for the table top role playing gaming pathfinder 2e
- Utilized third party fastjjson library to read in JSON formatted character and enemy stat blocks from third party sources
- Tracks turn order, rounds, conditions, and persistent damage with maps for each combatant and allows for automatic rolls of dice based on read in json input

TECHNICAL SKILLS

Languages: C++, C, Python, Javascript, SQL, Bash Scripting, Go, HTML, CSS

Frameworks: React, Django, Vite

Developer Tools: Docker, Unit Testing, Firebase, Vercel, Linux, Google Cloud Platform/GCP, Wireshark, VMware, VirtualBox, GDB, Git, MariaDB, SQLite

Libraries: Selenium, mpi, pthreads, openMP, fastjson, ncurses, QT Creator

Concepts: CI/CD, tcp/ip, Data Structures, Verbal and Written Communication, Algorithms, Product Management, Development, Software Engineering, Hardware, Debugging, Testing, Computer Architecture, Documentation, Software Development

AWARDS

Dean's Honor List

May 2022

Dr. Blake Wentz, Dean

Chico, CA

- Being selected as a recipient of this honor indicates that I have attained a 3.5 GPA or higher for units taken this semester.