

jiuzhouhao

Personal Info

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Phone

+1 647-613-9983

Github

https://github.com/PacificViking

Education

Pursuing undergraduate studies in Computer Engineering at the University of Toronto, St George Campus. Expected to graduate 2027.

Skills

Webpage/Software/Competitive Programming - experience with many hobby projects

System Administration - hosts proxy and self-made chat server, familiar with Linux and the SQL language

Problem Solver - strong problem finding / debugging skills, enjoys automating mundane tasks rather than performing them

Safety Mindset - sanitizes inputs and control flows for every project

Non-Dependent - capable of finding and using information available to me using technology

Technologically Adept - frequently uses tools such as Photoshop, Blender, and Stable Diffusion

Languages

Fluent in English and Chinese

Hobbies

• Programming

• Philosophy and economics

• Cutting edge open source

• Technology

Misc. Participation

• Certificate Cutoff: Canadian Computing Competition, Senior

• Certificate Cutoff: Waterloo CEMC Euclid Competition

• Advent of Code 2021-2023

• Hack the Valley 8

Hello, I am Jiuzhou Hao, a programmer and tech enthusiast pursuing undergraduate studies for Computer Engineering. I look forwards to solving both bugs and real-life problems.

Projects

A personal censorship circumvention proxy

Challenges

• Creative idea generation inspired by academic research on firewall mechanisms and alternate circumvention proxies (shadowsocks)

• Reading and implementing network protocols to maintain package header integrity thus ensuring delivery

• Optimizing proxy throughput by interfacing with low level systems and multi-level caching

• Remote server administration using AWS: ssh, neovim, linux firewalls, configuration files

Achievements

• Relatively fast (1.6MB/s), stable network traffic from China to firewalled domains/addresses compared to other proxies (which require avid disconnection to avoid suspicion flagging)

• Consistently used by me and family for over a year.

Multi-peer airdrop-like file transfer

Challenges

• Communication between MacOS "Airdrop" API (in Swift) and Python (my language of choice). Solved by base64 command line interface.

• "Airdrop" API documented poorly: lack of relevant information (example code had to be translated from Objective-C)

• Major UI/UX considerations: application-like feel despite being an webapp, portability/distribution under MacOS security

• Multipeer asynchronous communication: syncing peer information after disconnection, nonblocking file IO, abstracted communication protocols with peers and API command line interface

Achievements

• Was not widely adopted, but was seldom used in my classes

Other Hobby Projects

• A fairy chess engine

• A few digital games with python/pygame

• Automatic renamer and pdf-compiler for documents taken with photo booth on MacOS during e-learning

• Imageboard crawler

• Decision tree based wordle solver

• Data denoising preprocessor and trend finder (for noisy sinusoidal data with exponentially decaying amplitude)

• Using/configuring Linux (NixOS) as a daily driver

• SMS receiver and web server for remote SIM card

• HTTP chat server with file uploading and chatrooms

Contributed To

• Adding, updating NixOS packages

• Hyprprop: xprop for Hyprland

• Budgeting app for Hackathon

• GuessTheLocation: location guessing game

Volunteer History

2020-11 - 2021-03;

Head of Sounds and Lights

*We Will Rock You (Musical) / FAME (Musical)*

2021-11 - 2022-03

Key Qualifications and Responsibilities

• Learning stage light positioning and control using manual

• Organizing microphone distribution to actors

• Working with music and stage director to understand needs

Key Achievements

• Modified stage lights at calculated angles for full, omnidirectional lighting for the musical

• Multiple creative ideas, including using TTS for a robotic announcer, making dark blue scenes more visible using specks of bright light

• Found and used undiscovered features in the control panel, including fixture groups, automatic shapes, and keyframing

2019-11 - 2023-03

Writer/Web Developer/Server Management

*Unofficial School Blog*

Key Qualifications and Responsibilities

• Developing and maintaining an unofficial online blog for my high school

• Writing entertaining content for the blog. This involved programming skills for interactively entertaining webpages, and image editing skills for content creation

Key Achievements

• Blog had 200 views per week at its peak during COVID periods

This resume was programmed using HTML and CSS, then exported to PDF, it was inspired by the template at <https://zety.com/blog/college-freshman-resume-example>. Access the source code on my Github page.