Sid Su

(703) 789-5506
sidsu7@gmail.com
www.linkedin.com/in/sid-su

An aspiring DevOps engineer learning to deliver secure, stable, performant and continuously available services with a strong *nix, coding and mathematical background. Passionate about emerging technologies such as VR/AR/XR, AI, Cloud and Quantum Computing

IBM (Octo Consulting Subsidiary) (Internship) May 2023 - Aug. 2023

The EchoNet Project: A Deep Learning AI product which translates audio data into coordinate data, then sends computer vision equipped drones to survey the predicted location. Worked on Team Edge to turn the models and frontend into an end-to-end usable product

- **Python Concurrency** with threading, subprocesses, listeners, pipes
- **Python HTTP web framework** using Flask, Simple Websocket, Waitress, Gunicorn, PyAudio
- **SQL Database design** and two message broker services with PostgreSQL as the SQL database, Psycopg3 and PostgREST as the Object-Relational Mappings (ORMs)
- **Live Streaming** with HTTP Live Streaming (HLS) from RTSP using FFmpeg, hls.js
- **NGINX** web servers and reverse proxy to serve files and securely serve the flutter frontend
- **Dockerization** with Docker, Podman (OCI) and OpenShift (Kubernetes)
- **Advanced Networking** with RedHat Enterprise Linux, Fedora, Debian Linux
- **Bash and Powershell scripting** for logging, scraping and automating programs
- **GitHub** version control with Git and Container Registry (GHCR)
- **Agile Workflow** with Microsoft Teams and GitHub Projects. Coordinated alternating day standups, integration and retrospectives
- **Outreach** to K-12 students with code demos and sharing my coding story

Skills

"Movie Trends Over Time: A Short History" (Apr. 2023-May 2023): Analyzed historical trends in movies in the context of technology and made data driven predictions for future trends in filmmaking

Used Python: NumPy, Scikit-learn, Pandas, SciPy, Beautiful Soup and Matplotlib

Home Lab (Sep. 2017-): Manage a home server running Debian to automate encoding to the AV1 codec with Rav1e and FFmpeg and store files

Used Linux: Debian, Gentoo, FreeBSD, Bash, Powershell, rav1e (libaom-av1), libvp9, FFmpeg, Samba, NFS, Jellyfin, Emby, Plex, VLC, Docker, Ansible, Btrfs, ZFS

Cryptography (July 2023-): Implemented encode and decode cryptographic algorithms, then used frequency analysis to attack and break them

Used: Haskell, Python, Jupyter Notebook, Scikit-learn, R (programming language)

"Got Tempo?": A score-attack rhythm game to train keeping tempo and rhythm

Used: Python with PyGame, Gimp, MuseScore 3, Audacity

"B-ball Accuracy Track": A watch app to track basketball shooting percentage

Used: Tizen native watch platform, C (programming language)

Philosophy of Computer Science (Jan. 2021-): Nondeterministic Finite Automata, Turing Machines, Philosophy of Types, Natural Language Semantics, Montague Grammar, Context-Free Semantics, Theory of Conditionals

Used: OCaml, Java, Ruby, Rust

"Factors for Performance": R analysis of factors that affect grades in K-12

EDUCATION

University of Maryland
BS Computer Science (2020-2024)

University of Maryland
BS Mathematics Statistics (2020-2024)

Chantilly High School
Advanced Diploma (2016-2020)

Certifications

ICAgile Foundation of Dev-Ops (ICP-FDO)

IC-Agile Certified Professional (ICP)

Amazon Web Services (AWS) Cloud Practitioner

Organizations

The Mighty Sound of Maryland (MSOM)

TBΣ Honorary Sorority

XR (VR & AR) Club

Terrapin Teachers

Maryland Ski Team

Accessibility and Disability Services (ADS) Notetaker

First Robotics Competition (FRC)

The Mighty Marching Chargers (MMC)

Experimental Chinese School (ECS) TA

Statistics Tutor

Languages

English

Chinese (Conversational)