Seeking Internship in Software Development Engineer

Zhenyu Lin

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EXPERIENCE

SFSU Mobile and Intelligent Computing Lab

Research Assistant 09/2021 – Current

- Conducting research on efficient DL algorithms for resource-constraint devices.
- Established secure remote access through SSH and maintained network security protocols for the **Linux server**.
- Mentored high school students in an **NSF-funded** summer program, focusing on efficient DL algorithms.
- Developed a Real-time Bionic Arm Control project that won a **Grand Price** out of 49 projects.

SELECTED PROJECTS

Full Stack University Student Center 01/2023 – 05/2023

(Teamwork as the leader, course project of Software Engineer)

- Developed the front-end logic using **ReactJS** and implemented **RESTful APIs** to handle database CRUD operations on the back end using the **NodeJS** framework.
- Utilized **Nginx** server to efficiently handle incoming requests.
- Implemented Github Action as a CI pipeline to streamline the code review process and workflow.

Contiguous Allocation File System in Unix 01/2023 – 05/2023

(Teamwork as the leader, course project of Operating System)

- Developed a Unix file system using **C language**, allowing users to effectively store and manage data.
- Utilized volume control blocks (VCB) and free space maps as data structures to efficiently store metadata and track disk space utilization.
- Developed a **file system driver** for users to interact with the file system.

Real-Time Machine Learning for Ultra Low-power Microcontroller 06/2023 – 08/2023

(Research Project)

- Utilized **PyTorch** for deep learning model training and deployed on-device using **TensorFlow-Micro**.
- Implemented **L1norm pruning algorithm** to compress the deep learning model.
- Implemented **Linear Quantization** to optimize the model to 8-bit for deployment.
- Achieved over 85% model compression, enabling real-time processing in 500ms in **cortex M base processor.**

Multithreaded SFSU Course Search Engine with GUI 06/2021 – 09/2021

(Individual Project)

- Implemented **multithreading** in the search backend using Python to retrieve class and professor information.
- Developed a GUI using **PyQT5** to display class and professor ranking scores.
- Implemented **Retry mechanism** for stable reconnection to the backend server.

Robust High-Density EMG Pattern Recognition Framework 06/2022 – 12/2022

(Research Project, Paper Published at IEEE NER, 2023)

- Developed the RoHDE framework, utilizing a **Generative Adversarial Network** to generate synthetic HD EMG signals that simulate unreliable recording conditions.
- Improved gesture recognition accuracy by up to 35% for **CNN-based models** affected by contact artifacts and loose contact disturbances.
- Introduced the **first solution** to the robustness issue in deep learning-based HD EMG PR

EDUCATION

San Francisco State University (SFSU), San Francisco, CA

- Master of Science (MS) in Electrical and Computer Engineering 08/2023 – 06/2025
- Bachelor of Science (BS) in Computer Science (GPA: **3.7**/4.0) 08/2019 – 06/2023

SKILLS

- **Programming Languages:** Python, Java, JavaScript, C, C++
- **Frameworks:** ReactJS, Bootstrap, Springboot, NodeJS, Django, PyTorch, TensorFlow
- **Software/Platforms:** Docker, Linux