Jericho Referente

Email : jyreferente@gmail.com
Phone : 469-230-8070

EDUCATION

University of California, Davis — Davis, CA
Bachelor of Science in Computer Engineering — *Sep. 2018 – Dec. 2022*

EXPERIENCE

Protempis — Sunnyvale, CA
SDE Intern — *Jan 2023 - present*
- **Testing Framework**: Applying object oriented principles to create a testing framework for Timing Server using Python Unit Testing.
- **Bug Fixes**: Learning process of contributing to large codebase and coding style of company through team commits in Jira and PRs through Bitbucket.
- **Networking Concepts**: Continuation of Study on Networking knowledge with protocols such as SNMP, PTP, and NTP.

Fereidouni Lab — Sacramento, CA
Student Developer — *Oct 2022 - present*
- **Image Processing**: Began by learning the basics of image processing with **bitmaps** in **Visual Basic**, transforming images using color filters.
- **Analyze and Auto Focus**: Refactored and optimized code for microscope Analyze function by finding bottleneck threshold where microscope was finding focus and oversampling. Improved auto focus functionality by calculating the focus based on the euclidean distance of the nearest 3 analyze boxes
- **Code Migration**: Worked with dlls and SDK documentation to allow code to be written in Visual basic, while calling on C code from original product. Found that the code could only be supported on 32-bit systems, and refactored existing code to run on that.

Google Developer Student Club — Davis, CA
Android Tutor — *September 2021- June 2022*
- Began as a club member learning concepts of **Android** such as **lifecycle** and **navigation**, eventually being exposed to design patterns such as **Adapter** and **Factory Method**
- Learned **Kotlin** to implement **navigation** between different screens, **networking** for fetching data from the internet, and **caching** to keep data locally for an informational Food Truck application.
- Volunteered as **Tutor** for course ECS 198F, for Android Development to help students with any questions

PROJECTS

DaviScout
Introduction to Web Development and Fullstack
- Website using **HTML**, **JavaScript**, and **CSS** for users to leave reviews for restaurants in Davis.
- Designed frontend with **Bootstrap** to create a responsive interface to facilitate seamless form control.
- Connected **MongoDB** with **Node.js/Express** for **CRUD** functionality, and designing a **Router** file.
- Used **Mongoose** for **Schema Design** and implemented **Authorization and Authentication** via Passport.
- Used **MapBox API** to plot restaurant locations; addressed common security issues by **Sanitization**

UDP Congestion Control
Networking Project focusing on Transport Layer Delivery
- Designed a reliable data delivery service using **UDP** sockets in **Python** by varying the methods of sending and receiving packets of data based on **duplicate acknowledgements** and **timeouts**.
- Improved/tested UDP protocol through different delivery methods such as **Stop and Wait**, **Static Sliding Window**, **Dynamic Sliding Window**, eventually making a custom congestion control algorithm which improved throughput and outperformed a TCP Tahoe implementation.
- Measured improvements in performance through calculation of average **tper-packet delay/throughput**.

PROGRAMMING SKILLS

- **Languages**: Python, HTML, JavaScript, CSS, C++, C, Kotlin, MATLAB, Visual Basic
- **Frameworks/Libraries**: Bootstrap, Node.js/Express, React
- **Technologies**: Linux/Ubuntu, Git, REST APIs, MongoDB, Mongoose, Docker, SQLite