Jack Warner Russell

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Education

Texas State University **GPA:** 3.92 Expected December 2023
Bachelor of Science in Computer Science San Marcos, TX

Leadership and Employment History

Charles Schwab, Software Developer Engineer Intern (Austin, Texas) June 2023 – Aug 2023

- Modernized the trade app from a monolith architecture to a single page app utilizing Angular and .NET MVC APIs
- Supported users by identifying improvements to TTI, error rate, availability, and 95th percentile time
- Accelerated the team's AGILE development by accepting, unit testing, and deploying backlogged user stories
- Designed the UX of a new internal engineering blog by delivering figma wireframes to stakeholders
- Won a business case challenge by leading research, development, and presentation, of a new innovative product

TxSt Computer Science Infrastructure Team, Instructional Assistant (San Marcos, Texas) Jan 2022 – Present

- Provide IT services including maintaining hardware/software, account management, and server administration
- Led development projects including the Inventory Manager, Temperature Sensor, and Net Boot Projects
- Facilitated a student outreach opportunity by mentoring students to develop their own Raspberry Pi Clusters

Phi Theta Kappa Honor Society, Lead Officer of the College Project (ACC Virtual) Sept 2020 – May 2021

- Managed co-chairs, members, and administrators to create different Student Centers for the Spring 2021 Project
- Contributed to the Fall 2020 Project creating a module teaching Equity-Minded Student Leadership to potentially all of the 40,000 students at ACC through online modules
- Collected, compiled, and analyzed research through focus groups, surveys, and articles to supply the necessary data for both the Equity-Minded Student Leadership Project (Fall 20) and Student Centers Project (Spring 21)

Projects

Raspberry Pi Temperature Sensor Dec 2021 – Aug 2022

- Implemented an automated room monitoring system to handle bad data from the current room thermostat
- Saved $500,000 of Research Servers from high temperatures by utilizing a raspberry pi, Python3, and open source libraries for database needs and email notification functionality
- Created a web-based UI through an Nginx Server
- Designed automated services to run the temperature and humidity sensor on the raspberry pi

Corrosion Detection Convolutional Neural Network Nov 2022 - May 2023

- Supported a NASA-sponsored study by creating a robust data pipeline to accurately measure corrosion in microscopic images of corrosion samples obtained from a microgravity environment
- Attained an impressive 40-60% accuracy rate by leveraging Open-MMLab's MMSegmentation library to construct a cutting-edge UNET model for corrosion detection, matching industry standards
- Effectively communicated our research to stakeholders and department members through engaging presentations

JPMorgan Chase "Data for Good" Hackathon Oct 2022

- Advised a nonprofit where to place their next youth homeless facility by analyzing needs and data across USA
- Selected Boston as the best location by identifying impactful metrics and training a K-means Clustering model
- Presented our findings and visualizations to a panel of stakeholders in competition with 16 other teams (won third)

Honors & Certifications

Education: 2023 Computer Science Excellence Award **|** Nomination for Student Employee of the Year **|** Texas State Dean's List (Every Semester)

Career: CodePath iOS Development Course Certification | NASA STEM Engagement and Educator Professional Development Collaborative: XR Scene and Camera Control, XR Physics and Ray Casting, and XR GUI and Deployment Certifications **|** Terry O'Banion Student Technology Award Champion

Technical Skills

Coding Languages: Experienced in C++, Java, Swift, and Python. Adept in HTML and Javascript
Technologies: Kubernetes, REST APIs, Xcode, OpenLDAP, Django, Docker, Linux, Raspberry Pi, Nginx, IPXE