Jackson Keus

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EDUCATION

San Diego State University Aug 2021 - May 2025

B.S. in Computer Science, GPA: 3.50, Relevant Coursework: Operating Systems, Algorithms, Linux/Unix Administration, Systems Programming, Blockchain, Cyber Security, Robotics, and Game Development

JOB EXPERIENCE

San Diego State University – *Computer Security Course Teaching Assistant* Feb 2024 - Present
- Led Demonstrated SEED Labs exercises for students covering operating system exploits on Ubuntu, including setuid attacks, environment variable exploitation, and buffer overflow attacks, using scripts written in C
- Deployed a Wazuh Manager node alongside Suricata on a ubuntu firewall to serve as an Intrusion Detection System and to collect and monitor logs from endpoint agents and network traffic for a attack lab scenario
- Provided assistants with course material for 50+ students and graded exams with 10+ free response questions

Northrop Grumman – *Software Engineering Intern* May 2024 - July 2024
- Co-Led the development of a prototype interface for Northrop Grumman's Battlefield Airborne Communications Node using Angular, Bootstrap, RxJS, NgRx, PrimeNg, HTML/CSS, and TypeScript
- Improved site continuity and responsiveness by integrating NgRx for state management with API updates, effectively optimizing state handling and data synchronization
- Collaborated with the software team using Figma to create user-friendly UI components, which were successfully implemented into the application in an Agile environment
- Addressed component redundancies by utilizing Angular's template-driven and iterative design methods, which led to improved code quality, greater reusability, and enhanced website performance

Northrop Grumman – *College Technical Intern* May 2023 - July 2023
- Designed and implemented scripts in Python to optimize data movement with pypathlib, md5 check sum verification, and Regex pattern finding. Resulting in an estimated time saved of 5-8 hours per week
- Utilized Pandas and Numpy for data analysis, calculations, and metrics of flight data, improving flight log analysis
- Leveraged Matplotlib, Numpy, and Pandas to create a program that produced dynamic visualizations of data and metrics for flights in an all-in-one excel file for on-site engineers to better evaluate flight tests

LEADERSHIP/RESEARCH EXPERIENCE

San Diego State Cyber Defense Team – *Jobs and Competition Officer* May 2024 - Present
- Ranked 121st out of 4,680 teams in the NCL 2023 fall team competition and a top 14% ranking in the individual competition, With focus on network analysis on WireShark, hash cracking with Hashcat, and OSINT
- Organizing team practices for 40+ members and interfacing with competition organizers

AI4BusinessLab Medical Q&A Large Language Model Project – *Student Researcher* Aug 2024 - Present
- Assisting in the development of a research matrix to organize and analyze data for an upcoming paper
- Building and testing systems for the model with Python, and exploring new techniques to improve its performance

PROJECTS

Virtual Enterprise Network – *Linux/Unix OS, VMware, Dovecot, LDAP, NFS, Nginx, Docker*
- Used virtualization to emulate 7+ Unix based operating systems creating a locally hosted private business network
- The network featured essential services including Dovecot for email, redundant DNS servers, a local Certificate Authority, LDAP user accounts, and git containerization with Docker

Simon Says Alarm Clock – *Raspberry Pi Pico, MicroPython, Bread-boarding, Thonny*
- Constructed a customized alarm clock utilizing a Raspberry Pi Pico microcontroller, programmed in MicroPython, to feature a unique Simon Says game mechanism for alarm deactivation
- Developed self-checking code to address hardware issues, providng stability for the LED display's functionality

TECHNICAL SKILLS

Languages: Python, C++, TypeScript, C, JavaScript, HTML/CSS
Developer Tools: Pandas, MatPlotLib, Numpy, Angular, RxJS, VMWare, Wireshark, NgRx, Web3, Figma, Git