

# ANTHONY HALLAK

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## EDUCATION

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**University of California, Riverside**  
Computer Science with Business Applications B.S.

*August 2018 - June 2022*  
*GPA: 3.70*

## TECHNICAL STRENGTHS

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**Programming Languages:** C, C++, Python, Bash,  $\text{\LaTeX}$ , TypeScript, Golang, Rust  
**Technologies:** Linux Kernel, Buildroot, Yocto, git, Metasploit, Burp Suite, Wireshark, React

## EXPERIENCE

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**Embedded Systems (BSP) Engineer** August 2022 - Present  
*Amazon.com – Lab126 Echo BSP*

- Created a Buildroot ramdisk to recover logs on a broken device after soldering the PCB to expose a UART shell
- Bootstrapped a 64bit kernel in Yocto from an existing 32bit config leading to performance improvement
- Wrote a custom log parser for finding crashes, resolved multiple Android security patches, trimmed device builds
- Triageed and aided in root cause analysis for multiple oncall issues regarding devices in the field

**Software Development Engineer Intern** June 2021 - September 2021  
*Amazon.com – Lab126*

- Added ad hoc extensibility via DynamoDB, allowing multiple on-call teams to use an internal tool
- Migrated the entire frontend stack from JavaScript to TypeScript for better maintainability
- Improved webpage speed to be cut by 300ms, resulting in faster load times for end users

**Penetration Tester - Contract Auditor** August 2020 - September 2020  
*Piñata Farms*

- Identified 3 critical vulnerabilities in a Vue web application, verified fixes were deployed
- Utilized Burp Suite to intercept and modify web requests, led remediation recommendations
- Discovered and reported GraphQL queries, bolstering their exfiltration defense

**Linux Administration Lead – Captain** October 2018 - Present  
*Western Regional Collegiate Cyber Defense Competition (WRCCDC) - 3rd place overall in 2021*

- Wrote automation scripts that properly configure endpoints and saved 15-25 minutes for each of the 6-8 machines
- Repaired and reconfigured SMTP email using postfix to allow LDAP users to send and receive emails
- Audited an estimated 50 users and services running to safeguard machines against 70% more attacks

## PROJECTS

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**Citrus-SIEM - CitrusHack 2021 - Winner of the Cybersecurity category** April 2021

- Utilized Material UI in React and Typescript to make a fanciful and responsive user display
- Implemented the core server logic in Golang for safe, garbage collected web concurrency
- Wrote PowerShell and Bash scripts to automate the information forwarding

**GoShark - CitrusHack 2020 - Winner of the Cybersecurity category** April 2020

- Captured 100% of incoming and outgoing packets from a specified network interface device
- Analyzed the packets for plain text transmission of critical data to notify the user of insecure communications
- Generated a  $\text{\LaTeX}$  document summarizing the vulnerabilities enabling users to quickly identify areas of weakness

**EvilPi - CitrusHack 2019 - Winner of the Cybersecurity category** April 2019

- Created a wardriving Raspberry Pi to reduce the time of Evil Twin attacks by approximately 30 minutes
- Automated the Aircrack-ng suite to deauthenticate a wireless network and capture handshakes
- Sent the captured handshake to Google Cloud Platform (GCP) to crack the WiFi password