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**HARRISON "COLE" WILKINSON**

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**University of Texas at Austin – Bachelor of Science in Mechanical Engineering**

**May 2024**

**Minor:** Computer Science

**GPA:** 3.83

**Relevant Coursework:** Elements of Data Analytics (Python), Elements of Software Engineering (Python), Programming and Engineering Computer Methods (MATLAB), Elements of Computer Networking (Python)

## EXPERIENCE

**Full Stack Software Engineer** **Harmonic Bionics** **Mar 2024 – Current (Austin, TX)**

- Leverage Next.js to build a comprehensive dashboard for physical therapists to aggregate patient joint data
- Construct data pipelines in Python to convert raw joint data into actionable items for physical therapists

**Full Stack Software Engineer** **QOZB Capital** **Nov 2021 – Current (Austin, TX)**

- Utilize Next.js, Typescript, Firebase, GCP, and AWS to build a cryptocurrency exchange with 6,000 users
- Write backend functionality using Node.js, Serverless Functions, and Solidity smart contracts
- Manage ACH, Wire, Credit, and Debit transactions through Rest APIs
- Architect GCP and AWS cloud infrastructure by designing and managing cloud functions for webhooks, VMs for blockchain oracle validation, identity management, and Firebase for authentication and data storage

**Security Research Engineering Intern** **Cisco** **Summer 2023 (Austin, TX)**

- Augment Python fuzzing software by introducing server-side functionality and raw socket compatibility
- Lead fuzzing campaign against legacy libraries using AFL++, libfuzzer, honggfuzz, and FuzzTest
- Write harnesses in C & C++ to interface between our fuzzing engine and the target
- Create fuzzing-based learning modules for security engineers within Cisco

**Software Engineering Intern** **REALLY Communications, Inc.** **Summer 2022 (Austin, TX)**

- Leverage Remix.js to create a web application for users to compare phone plans
- Design Express.js backend that pulls data from a PostgreSQL database
- Scrape phone plan websites with Python and compile data into our database

**Cloud Engineering Intern** **HCA Healthcare** **Sep 2021 – May 2022 (Remote)**

- Manage Azure, GCP, and Splunk environments through playbook automation
- Create Azure Sentinel Analytic Rules using KQL Queries and Azure Logic Apps

## PROJECTS

**Arthrovise** **Feb 2024 - Present**

- Remote monitoring platform for arthritis patients prototyped with an MPU6050 IMU & an ESP32
- Joint data is transmitted over BLE to React Native Application to give real-time feedback on movements
- Backend is written in NestJS that will connect to a dashboard for therapists to view patient progress

**Eleventeen** **Nov 2023 – Jan 2024**

- Slack application for optimized scheduling of meetings within enterprises
- Allow any user to automatically find the next available time for all users within a Slack group
- Leveraged Google OAuth to sync between Slack & Google Calendar effortlessly

**Hockey Robot** **Aug – Dec 2023**

- Custom-designed robot to shoot pucks at goals based on infrared lights
- Used Arduino for the motor drivers & PID control & a Raspberry Pi for localization and navigation

## SKILLS / AWARDS

- **Technical Skills:** JavaScript, TypeScript, Python, NextJS, Embedded Systems, C/C++, DevOps, GCP/AWS
- **Vanderbilt Innovation and Entrepreneurship Society** – 48 Hour Launch Pitch Competition – Winner
- **Tau Beta Pi Engineering Honors Society** – Director of Professional Development