Zane D. Mountcastle

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education

September 2014 to May 2018

New York University Abu Dhabi, Bachelor of Science in Computer Science
Minors in Mathematics and Interactive Media, GPA 3.76

Relevant Coursework: Physical Computing, Development in the Public Interest, Bluetooth LE, Parallel Computing, Blogging to Bullets: Changes and Challenges Facing Media, Graphic Design Studio, Communication and Technology, Computer Security, Computer Systems Organization, Operating Systems, Algorithms, Data Structures

experience

September 2015 to Present

The Gazelle Student Newspaper, NYU Abu Dhabi
Lead Front-End Engineer, Lead UI/UX Designer

- Built The Gazelle's front-end user interface as a modular isomorphic single-page application (SPA) on a modern development stack including React, Webpack, Node.js, Express and Falcor
- Collaborated closely with development team, editors and writers to redesign mobile and web interfaces guided by core principles proposed by editors-in-chief in accordance with best human-computer interaction (HCI) practices
- Recruited, trained and supported a team of junior front-end engineers to maintain the existing code base and develop new features with an emphasis on modular reusability, readability and maintainability

June 2017 to August 2017

Honeywell, Morris Plains, NJ, USA
Software Engineering Intern, Industrial Internet of Things (Sentience IoT Platform)

- Developed Sentience Edge minimum viable product (MVP) as a real-time analytics and data filter platform intermediary between industrial sensors and the Sentience Cloud; Deployed the Sentience Edge MVP in a Honeywell Transportation Systems factory establishing Honeywell's first Sentience-enabled Connected Plant
- Participated in Sentience Edge system architecture design, end user experience, product vision, market strategy, and product monetization discussions

February 2016 to May 2016

BMAS Agency, London, UK
Front-End Web Development Intern

- Participated in product design discussions to bring concepts through to fruition
- Worked directly with designers to build and ship bespoke websites using Wordpress CMS integration
- Constructed both low and high fidelity prototypes, user journey mapping, flow diagrams, etc. to test functionality for new designs

recent projects

Summer 2017

Sniffer – *Exposes the privacy infringements of wireless communication*
Continuously queries for wireless network mDNS-SD packets and greets passersby with their real names broadcasted by their devices without their knowledge

Spring 2017

Flowmoji – *A private messenger application with mass surveilance resistance*
Built on a fork of Signal iOS, Flowmoji floods attackers with bogus end-to-end encrypted messages to quickly exhuast and overwhelm unencryption resources; Developed as a class project at NYU's graduate Interactive Telecommunications Program (ITP)

Fall 2016

Nogo – *Inflight Wi-Fi spoofing attack resistance*
Reverse engineered inflight wireless access point paywall system and developed a method for spoofing fellow passengers using unencrypted packet sniffing; Proven on industry leading Gogo and GEE platforms; Actively researching and developing a method resist against similar spoofing attacks as my senior thesis Capstone Project

Spring 2016

Spoof - *Internet access is a human right*
MAC address randomization for unlimited freemium Internet paywall avoidance

leadership

May 2015 to Present

Computer Science Student Committee, NYU Abu Dhabi
Chairman, Design Lead

- Actively participated in the organization of CS-related campus events including web development tutorials, competitive programming and Linux tutorials to foster a sense of community and promote entrepreneurial collaboration on CS-related projects
- Led comprehensive branding effort of the CSSC