

Zane D. Mountcastle

Software engineer with a passion for product design

zane.mountcastle@nyu.edu
behance.net/zanemountcastle
linkedin.com/in/zanemountcastle
github.com/zanemountcastle
www.zanemountcastle.com

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: Algorithms, Data Structures, Computer Security, Computer Systems Organization, Operating Systems, Physical Computing, Development in the Public Interest, Bluetooth LE, Parallel Computing, Graphic Design Studio, Communication and Technology

experience

September 2015
to Present

The Gazelle Student Newspaper, NYU Abu Dhabi

Software Engineer Team Lead, UI/UX

- Designed and engineered The Gazelle's user interface for over 12,000 monthly readers worldwide including a diverse student body of roughly 1,000 undergraduates representing over 100 nations
- Built The Gazelle's user interface as a modular isomorphic single-page application (SPA) including a custom-engineered CMS on a modern development stack including React, Webpack, Node.js, Express, and Sass
- Co-led the software engineering team with a focus on product design; Recruited, trained, and supported a team of often-remote junior front-end software engineers to drive development in an Agile environment

June 2017 to
August 2017

Honeywell International, Morris Plains, NJ, USA

Software Engineer Intern, Industrial Internet of Things (Sentience IoT Platform)

- Contributed to Sentience Edge alpha-phase product engineering as a real-time analytics and data filter platform intermediary between industrial sensors and the Honeywell Sentience Cloud
- Alpha-tested and deployed Sentience Edge in a Honeywell Transportation Systems factory establishing Honeywell's first Sentience-enabled Connected Plant
- Actively contributed to 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

- Collaborated on a cross-functional design and development team ideating, developing, and shipping bespoke Wordpress-based websites for a diverse range of clients
- Constructed both low and high-fidelity prototypes, user journey mapping, flow diagrams, etc. to test functionality for new website designs

recent projects

Fall 2016 to
Present

Senior Capstone Project – 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 to resist against similar spoofing attacks as my senior Capstone Project

Summer 2017

Sniffer – Exposing the privacy infringements of Zeroconf wireless communication

Continuously queries wireless network for unencrypted mDNS-SD packets and greets passersby with their real name, which is broadcasted by their devices without their knowledge

Spring 2017

Flowmoji – A private messenger application with mass surveillance resistance

Built on a fork of Signal iOS, Flowmoji floods attackers with bogus end-to-end encrypted messages to quickly exhaust and overwhelm decryption resources; Developed as a class project at NYU's graduate Interactive Telecommunications Program (ITP)

Fall 2016

Penni – A door-to-door virtual travel assistant

A personal travel assistant chatbot built on IBM Watson cognitive computing technology and winning project at the 2016 IBM Watson Cognit Etihad Airways Hackathon

leadership

May 2015 to
Present

Computer Science Student Committee, NYU Abu Dhabi

Board Member, Design Lead

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

technologies

React, Node.js, Express, Webpack, React Router, Babel, JavaScript/ES6/JSX, HTML5, CSS3, Sass/SCSS, Python, Git, C/C++