Melanie A. Chow

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Education

University of Chicago, Chicago IL
B.S in Computer Science, June 2021 || GPA: 3.91

- **Relevant Courses:** Computer Systems, Networks and Distributed Systems, Programming Languages, Usable Security and Privacy, Inventing, Engineering, and Understanding I/O Devices
- **Programming Languages:** C, Javascript, Python, Java, SQL, R, HTML, CSS
- **Tools & Other Skills:** AWS, Puppet, Terraform, GPG, Angular, React Native, Express JS, Node JS

Experience

Braintree / PayPal Chicago, IL
Software Engineer Intern *June 2019 – August 2019*

- Worked alongside senior engineers on the Infrastructure team to redesign secrets management, and build public key infrastructure (PKI)
- Created tools and tests to issue, sign, and deploy private and public SSL certificates, shortening workflow times by over 90%
- Developed automated reporting for expiring secrets and access activity, significantly reducing risk of down-time
- Implemented necessary infrastructure and encryption protocol for private key sharing and verification

UChicago Core Tutors Chicago, IL
Computer Science Tutor *April 2019 – Present*

- Tutor for the Computer Science Intro Sequence (i.e. Data Structures & Algorithms, Computer Systems)

Chicago Department of Public Health Chicago, IL
Software Developer – Tech Team *October 2018 – April 2019*

- Created a mobile application for the Chicago Department of Health to easily help medical providers research and report diseases and necessary protocols
- Restructured disease data for scalable access, and refactored the application from Ionic to React Native

Content Carnivores Chicago, IL
Software Engineer Intern *October 2018 – April 2019*

- Led a project on the intersection between online financial content and SEC/FINRA compliance
- Solely built the platform to detect future compliance violations by matching input to common violations, previous cases, and relevant laws

Medivis Brooklyn, NY
Software Development Intern *June 2018 – September 2018*

- Created a CosmosDB database and designed schema to effectively store and edit anatomy part data
- Built a web interface and REST API for teams to add and update anatomy parts, and for clients to view and customize their own anatomy tags

Projects

Destress Cyborg *EEG Headband, Dragonboard 401c*

- Wearable tech that analyzes brain waves and uses computer vision to blur/replace visual stressors
- Created algorithm to determine what combinations of brain wave frequencies indicated stress
- Awarded “Best Overall Hack” and “Best IoT Hack” at UChicago’s Uncommon Hacks (Feb 2019)

HICE (on my wrist) *Arduino, C++, 3D printed*

- Body temperature watch that heats or cools by actively reading skin and nearby temperature
- Developed algorithm to determine when to heat/cool, and duration needed to feel temperature change
- Designed the battery and proto-board holder of the wearable

Project Safe Route *Angular, Express JS, Google Maps*

- Web application that determines the safest route home, based on NYC public crime data
- Determines a ‘safety score’ for each route, and generates a crime heat map with interactive markers