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, 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 time 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: CMSC 151, 152, 154 (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 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*

- Designed and created a CosmosDB database to effectively store, access, and edit anatomy part data.
- Built a web interface for teams to add and update anatomy parts, and for clients to view and customize their own anatomy tags.
- Built and designed a REST API to regulate data transfer between the interface and database.

Projects

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 the duration needed to feel temperature change.
- Designed the battery and proto-board holder of the wearable.

Destress Cyborg   *EEG Headband, Dragonboard 401c*

- Wearable tech that analyzes brain waves and uses computer vision to blur/replace visual stress triggers.
- Analyzed brain wave feeds to determine what combination of frequencies indicated a user was stressed.
- Awarded Best Overall Hack and Best IoT Device at Uncommon Hacks 2019.

Project SafeRoute   *Angular, Express JS, Google Maps*

- Web application that determines the safest route home, based on NYC public crime data.
- Generates a crime heat map, and cluster map that displays crime locations with interactive markers.