Melanie Chio

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EDUCATION

Stony Brook University – B.S. Computer Science August 2018 – Expected May 2022

- Relevant Coursework: Analysis of Algorithms, Computer Networks, Data Structures, Data Visualization, Natural Language Processing, Object Oriented Programming, Programming Abstractions, Software Engineering, Systems Fundamentals
- Women in STEM & Engineering (WISE) Honors Program

TECHNICAL EXPERIENCE

Citi – *ICG Software Development Intern* June 2021 – August 2021

- Designed and implemented novel UI frontend components for 16 pages to track and organize internal team documentation
- Built 25% of 40+ Tableau dashboards in testing to stress test data clusters and backend pipelines prior to internal launch
- Collaborated with 2 developers to develop and push to production data probe for Tableau using Python Selenium to automate identification of 87% of node and CPU related errors

Blind Love Letters – *Web Developer* July 2020 – January 2021

- Developed web app with 3 developers ahead of beta launch using React, HTML, CSS, JavaScript, jQuery, Bootstrap, Firebase
- Collaborated with 3 UX designers to create novel UI components from high-fidelity prototypes for About and Profile pages

Stony Brook University – *Systems Fundamentals I: Teaching Assistant* August 2020 – December 2020

- Hosted 4 office hours per week to help 100+ students understand systems concepts and debug code in MIPS Assembly

PROJECTS

Celtics Congressional Redistricting August 2021 – December 2021

- Built full stack web application to generate congressional redistricting plans of equal population with 3 team members
- Implemented interactive map component to allow users to toggle and view current geospatial boundaries of districting plans
- Developed Python and Slurm scripts to automate the process of cleaning precinct-level geospatial data and creating 90,000 random redistricting plans on the SeaWulf Supercomputer on multiple nodes and cores using the MGGG MCMC algorithm

Clarity – *HackDuke: Ideate 2020* July 2020

- Designed full flow, medium fidelity UI web application to make remote learning accessible for Autistic middle school students
- Researched target demographics to understand the shortcomings of existing technologies and need for product in market

Discover RTC: Data Processing Pipeline – *Rewriting the Code* June 2020 – August 2020

- Developed full-stack web app with 3 college students to automate the process of accessing and analyzing membership data
- Built 5 visualization models with Tableau and connected them to Google Sheets and Railsway Importer to enable live updates
- Implemented data cleaning script using JavaScript and Airtable API on over 7,000 cells of data creating 78% more accurate visualizations and subsequently populating over 5,000 individual profile pages
- Placed 3rd against 20 project teams after presenting to RTC, Morgan Stanley, Two Sigma, SAS, and Bank of America leadership

Other: First Place – AT&T Women in Tech Hackathon 2016, Second Place – JPMorgan Youth in Tech Challenge 2016

LEADERSHIP POSITIONS

Theta Tau Professional Engineering Fraternity – *Service Chair* August 2021 – Present

- Executing biweekly community service events with local nonprofits and businesses reaching over 25 fraternity members
- Organizing spreadsheets, event itineraries, and budgeting information using Notion workspace and Google Sheets

Other: Peer Mentor – College of Engineering and Applied Sciences, Recruitment Chair & Professional Development Chair – Theta Tau

RELATED SKILLS

- Programming Languages: Java, Python, HTML, CSS, JavaScript, C++, C, MIPS Assembly
- Other: React, Java Spring Boot, Express.js, SQL, Firebase, Figma, Tableau, Office 365