

## Education & Skills

Johns Hopkins University, B.S. Computer Science, Applied Math & Statistics, GPA 3.81/4.0, Dean's List Aug 2018 - May 2021  
 Coursework: Data Structures, Intermediate Programming in C & C++, Discrete Math, Calculus III, Differential Equations  
 Organizations: HopHacks Cohead of Design, JHU ICPC Competitive Programming Team

### Competitive Coding:

- Bloomberg CodeCon at JHU: 2<sup>nd</sup> Place Undergraduate/31 grads and undergrads (4<sup>th</sup> Place overall) Nov 2018
- ACM International Collegiate Programming Contest Mid-Atlantic Regional: 5<sup>th</sup> Place/15 teams Nov 2018
- USA Computing Olympiad: Platinum Division Qualifier, Top 10% of contestants Jan 2017

Web Dev: Very Experienced: React, Redux, Saga, JavaScript/TypeScript, Jest, HTML, SCSS Familiar: Open Source, MaterialUI

Other: Experienced Java, Python, C#, Unity Familiar: Django, WebSocket, Bash, C, C++, Docker, NodeJS

Tools: Agile, Atlassian JIRA Confluence Crucible, Linux, Command Line, Git (branching and open source)

Design: Adobe Suite. Designed the Official JHU 2022 Class Banner & Class T-shirt given to 1,300+ Freshman.

## Experience

Johns Hopkins Applied Physics Laboratory Air Missile Defense, Laurel MD May 2019 — Aug 2019  
 Software Engineer Intern <React, Redux, Redux-Saga, TypeScript, Jest, HTML, CSS, WebSocket, MaterialUI, Cesium, Docker/>

- Developed UI components using ReactJS and backend Redux-Saga data pipelines for a Department of Defense Integrated Air Missile Defense mission planner for Navy Warfighters
- Merged ~7,700 lines of robust code out of the ~25,000 lines coded by 4-5 active fulltime developers
- Wrote extensive end-to-end tests and integration tests for every feature to verify Redux store states after async calls
- Presented my work to senior leadership within the Air Missile Defense Sector

Semester.ly, Baltimore MD Jan 2019 — May 2019

Full Stack Software Engineer Intern <React, Redux, JS, Jest, Python, Django, HTML, SCSS, PostgreSQL, Linux, Open Source/>

- Introduced new features to the open-source course scheduling repo and helping deliver schedules to over 5,000 users
- Coded a data import flow using Django MVC framework, interfacing with JHU IT servers to verify thousands of schedules
- Helped other interns with frontend design using ReactJS and SCSS, pushing several visual enhancements to the repo

Princeton University, Troyanskaya Laboratory, Princeton NJ Jun 2017 — Aug 2017

Research Intern <Python, Multiprocessing for Computational Genomics, Bash, Linux/>

- Lead the intern team on research and development of a backend gene fold overrepresentation data analysis repository
- Designed a multiprocessing overhead mapping system, speeding up tests like single-thread PAGE by 5x using just 8 cores
- Wrote seven statistical algorithms and unit tests in 1,500 lines of robust, modular and well-documented code
- Presented findings to the Deputy Director of Genomics at the Simons Foundation in New York City

## Activities

HopHacks Hackathon Organizer Team Dec 2018 - Present

Cohead of Design <React, MeteorJS, Linux, LESS, Adobe Photoshop & After Effects /> [www.hophacks.com](http://www.hophacks.com)

- Co-designed the Spring 2019 and Fall 2019 website Frontends with over 15,500+ combined views
- I coordinate with the design and website teams helping deliver design materials for each Hackathon event

Jane Street 2019 SEE Program, 1 of 32 invitees May 2019

- Attended an all-expenses paid 3-day trip to Jane Street Headquarters in NYC learning about working on the trading floor
- Selected for my Blotto game entry, using simulations and psychology to rank ~40th/300 entries from fulltime employees

## Awards

2016 National STEM Video Game Design Challenge Team Award (\$3,000 prize), 1 of 18 winners from 3,000+ entries Oct 2016

2<sup>nd</sup> Place/35+ teams, Best Use of Google Cloud (\$768), HopHacks Sept 2018

Assistive Tech Track, Best Use of AWS/10+ teams (\$500), HackNYU Feb 2017

Best Mobile App/10+ teams (\$200), HackMHS II May 2015

## Projects

Frontend for AR- Charm City Murals, winner of the HopHacks 2<sup>nd</sup> Place award [github.com/jshi22/Charm-City-Murals](https://github.com/jshi22/Charm-City-Murals)

Frontend rendering augmented reality machine learning output using Python, Flask, HTML and Heroku Winter 2019

Video Game- Radiant, winner of the National STEM Video Game Design award [github.com/jshi22/Radiant](https://github.com/jshi22/Radiant)

Developed at a Carnegie Mellon University game academy, 6,000 lines of C# code in the Unity Game Engine Summer 2016

Android App- Pirate Maps [play.google.com/store/apps/details?id=com.CSL.HSSPirateMaps](https://play.google.com/store/apps/details?id=com.CSL.HSSPirateMaps)

Navigating buildings, implemented pathfinding using Dijkstra's shortest path with backtracking written in C# Fall 2018