

## Education & Skills

Johns Hopkins University, B.S. Computer Science, Applied Math & Statistics, GPA 3.81/4.0, Dean's List Aug 2018 - May 2022  
 Coursework: Data Structures, Intermediate Programming in C & C++, Discrete Math

Organizations: JHU ICPC Competitive Programming Team, HopHacks Cohead of Design & Frontend, ACM Freshman Board

Web Dev: Experienced: React, Redux, Saga, JavaScript/TypeScript, Jest, HTML, CSS/SCSS/LESS, Material **Familiar:** Open Source

More Languages & Frameworks: Experienced Java, JUnit, Python, C#, Unity **Familiar:** C, C++, Django, WebSockets, Bash

Productivity & Tools: Agile, Crucible, Fisheye, JIRA, Confluence, Travis CI, Netlify, Heroku, Linux, Command Line, Git

Digital Design: Adobe Photoshop, Illustrator, After Effects. I designed the official JHU 2022 Class Banner and Class t-shirt.

## Experience

Johns Hopkins Applied Physics Laboratory Air Missile Defense, Laurel MD May 2019 - Present

Software Engineer Intern <React, Redux, Redux-Saga, TypeScript, Jest, C#, Python, WebSockets, MaterialUI, Cesium/>

- Developed features for a Department of Defense Air Missile Defense mission planner to be used by Navy warfighters
- Contributed ~7,700 lines of code out of the ~24,000 lines written by 4-5 main developers since the start of my internship
- Lead framework development for Cesium 3D globe integration, a modular Modal system and aspects of the UI design system, with fulltime engineers following my designs when implementing their new features
- Wrote end-to-end tests and async code for features interfacing between the UI and a backend synchronization service

Semester.ly, Baltimore MD

Jan 2019 - Present

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 2,000 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 React 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 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, Cohead of Design and Frontend

Dec 2018 - Present

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

- Co-designed the Spring 2019 and Fall 2019 website Frontends with over 11,100+ combined views
- Appointed Cohead of Design by the Director after my first year with HopHacks

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 full time employees

## Awards

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

Coding	Platinum Division Qualifier, Top 10% contest ranking	@ USA Computing Olympiad	Nov 2018
Competitions	4 <sup>th</sup> Place/31 contestants (2 <sup>nd</sup> Place undergraduate)	@ Bloomberg CodeCon at JHU	Nov 2018
	5 <sup>th</sup> Place/15 teams	@ ACM ICPC Mid-Atlantic Regionals at JHU	Jan 2017

Hackathons	2 <sup>nd</sup> Place/35+ teams, Best Use of Google Cloud (\$768)	@ HopHacks, Johns Hopkins University	Sept 2018
	Assistive Tech Track, Best Use of AWS/10+ teams (\$500)	@ HackNYU, New York University	Feb 2017
	Best Mobile App/10+ teams	@ HackMHS II, Millburn High School	May 2015

## Projects

Machine Learning- 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)

Training vision models on just one image using Python, TensorFlow and Augmentor for recognizing Baltimore murals 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.CSI.HSSPirateMaps](https://play.google.com/store/apps/details?id=com.CSI.HSSPirateMaps)

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