

## 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, Calculus III, Differential Equations  
**Organizations:** JHU ICPC Competitive Programming Team, HopHacks **Cohead of Design**, ACM Freshman Board

**Web Dev: Very Experienced:** React, Redux, Saga, JS/TS, GatsbyJS, Jest, HTML, CSS/SCSS **Familiar:** Open Source, MaterialUI  
**More Languages & Frameworks: Experienced** Java, JUnit, Python, C#, Unity **Familiar:** C, C++, Django, WebSockets, Bash  
**Productivity & Tools:** Agile, Scrum, Docker, Crucible, Fisheye, JIRA, Confluence, Travis CI, Netlify, Heroku, Linux, Command Line, Git  
**Design:** Photoshop, Illustrator, After FX. 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, Docker, MaterialUI, Cesium/>**  
 • Developed full stack features for a Department of Defense 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 since I began  
 • Developed an extensible Modal system and wired 25+ asynchronous features querying a synchronization microservice  
 • 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 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** Dec 2018 - Present  
**Cohead of Design and Frontend <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 11,500+ 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 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  

<b>Coding</b>	Platinum Division Qualifier, Top 10% contest ranking	@ USA Computing Olympiad	Nov 2018
<b>Competitions</b>	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
<b>Hackathons</b>	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.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