

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: Very experienced: React, Redux, Saga, JavaScript/TypeScript, Jest, HTML, CSS/SCSS/Less, Familiar: Open Source

More Languages & Frameworks: Very 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 ~7,000 lines of code out of the ~22,000 lines written by 4-5 active developers since the start of my internship
- Lead framework development for Cesium 3D globe integration, a modular Modal system and various aspects of the UI design system, with fulltime engineers following my designs when implementing their new features
- Wrote end-to-end & integration tests for features interfacing between frontend UI and a backend synchronization service

Semester.ly, Baltimore MD

Jan 2019 - Present

Full Stack Software Engineer Intern <React, Redux, Jest, Python, Django, Docker, 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

- Co-designed the Spring 2019 and Fall 2019 website frontends approval with over 600+ combined views
- Appointed Cohead of Design by the Director after my first year with HopHacks

Jane Street 2019 SEE Program, Invitee

May 2019

- 1 of 32 invitees who attended an all-expenses paid 3-day trip to Jane Street Headquarters in New York City
- Met with developers and quantitative traders, learning about working on the trading floor, market structure and arbitrage

Awards

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

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

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| Hackathons | 2 nd 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 2nd Place award 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

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

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