

# JONATHAN OPPENHEIMER

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## EDUCATION

### **Purdue University – College of Science**

*Bachelor of Science in Computer Science, Minor in Political Science*

**West Lafayette, IN**

*August 2021 – December 2024*

- Cumulative GPA: 3.88/4.00, Dean's List, 2x Semester Honors
- Relevant Coursework: Data Structures and Algorithms\*, Computer Architecture\*, Programming in C, Discrete Mathematics, Problem Solving and Object-Oriented Programming, Data Science Labs: Calculus (\*currently enrolled)
- Activities and Societies: Hack the Future, Purdue Outing Club

## WORK EXPERIENCE

### **Purdue Department of Electrical and Computer Engineering/Department of Mathematics**

*Undergraduate Teaching Assistant*

**West Lafayette, IN**

*August 2022 - December 2022*

- Taught students Python programming concepts for data science, including topics such as function visualization, data cleaning, Boolean indexing, structured types, and symbolic computation, in MA 16290, Data Science Labs: Calculus

### **Space Ground System Solutions – Rapid Delivery/Antenna Services Team**

*Software Engineer Intern*

**Alexandria, VA**

*June 2022 - August 2022*

- Served on an Agile team to produce synchronous client/server software packages for a remote ground antenna supporting ADS-B aircraft data, and NOAA polar orbiter satellite data
- Utilized NASA's GMSEC message specification, a standardized messaging architecture for satellite communications, to implement complete command and control of remote ground antenna and all client-server communications. Wrote brand new message formats for GPS data, and antenna pointing angle transfer
- Developed custom driver for serial communications to an antenna rotator for remote, manual user control, and real time satellite tracks

### **Glass House Recycling LLC**

*Founder/CEO*

**Falls Church, VA**

*February 2020 – Present (remote)*

- Founded curbside glass-pickup business with brother at age 17 to meet demand after Falls Church City stopped providing municipal glass recycling service, later incorporated, set up customer accounts and mailing/billing with limited reliance on third party services
- Leveraged digital advertising and media (NBC, WAMU, NowThis) to grow customer base to over 100 residential households
- Filed appropriate business tax forms (1065 + K1s, 1040s; Schedules B, E, SE, 2; etc.)

## PROJECTS

### **Leadership Lafayette Storyboard – Hack the Future**

*React, Node.js, Mongoose*

**West Lafayette, IN**

*October 2021 – April 2022*

- Served as developer in a team of 8 working in an Agile environment to create an all-in-one testimonial submission tool for a local nonprofit, Leadership Lafayette, through the academic year. Site entered production in April 2022
- Responsible for critical user-facing testimony submission page elements and assisted with administrator dashboard development

### **My CS Plan – Hello World Hackathon**

*Next.js, Flask*

**West Lafayette, IN**

*September 2021*

- Collaborated on a four-person team during Purdue's 2021 Hello World Hackathon to create a web app that returned a minimum listing of classes to achieve two Purdue CS concentrations, given two user choices
- Designed and implemented front-end webpage, and interfaced with flask backend, making HTTP requests with user-selected tracks to fetch and display the optimized course listings

### **Mustang Mug**

*Svelte, Node.js, Google Firebase*

**Falls Church, VA**

*April 2021 – August 2021*

- Shared leadership of a team that designed, built, and deployed an online ordering web application for my high school's café, replacing a staff-intensive and inefficient Google form ordering system
- Used MySchoolBucks' API to provide payment options, and report sales to school's existing platform, hosted application on Firebase
- Included a user-facing store that wraps the MySchoolBucks point of sale system and an administrator dashboard for complete configuration of the store's hours and menu
- Wrote user documentation for students and school staff, and technical documentation for future student maintainers

## OTHER INFORMATION

*Languages:*

Java, C, Python, HTML/CSS/JS, LaTeX, bash/zsh/sh

*Tools/Environments:*

Git, GitHub/GitLab, various web frameworks, RHEL 7/8, Raspbian, macOS

*Awards:*

Eagle Scout, Purdue Department of Computer Science *Kunze* Scholarship

*Certifications:*

Active 'Secret' level security clearance, Purdue College of Science Intercultural Teamwork Certificate, NOCTI Computer Programming, NOCTI Advertising and Design