

# Olivia Hu

314-309-5183 | [huolivia@seas.upenn.edu](mailto:huolivia@seas.upenn.edu) | [linkedin.com/in/olivianhu](https://www.linkedin.com/in/olivianhu) | [github.com/olivianhu](https://github.com/olivianhu)

## EDUCATION

### University of Pennsylvania

Philadelphia, PA

*BSE in Computer Science (AI Concentration), Minor in Mathematics*

*Aug. 2023 – Present*

- GPA: 4.0/4.0
- **Relevant Courses:** Data Structures and Algorithms, Big Data Analytics, Operating Systems, Computer Systems, Multivariable Calculus, Linear Algebra
- **Activities:** WALK Magazine Designer, Women in Computer Science (Education Committee)

## EXPERIENCE

### Gusto

New York, NY

*Software Engineering Intern (Business Insurance Team)*

*June 2025*

- Spearheaded the full-stack development of the **Insurance Hub**, the first centralized dashboard for Business Insurance within Gusto's platform
- Designed and implemented new **API** endpoints across multiple codebases, enabling seamless policy data retrieval
- Contributed to service-to-service communication logic and ensured backward compatibility during backend changes

### Penn Labs

Philadelphia, PA

*Frontend Engineer, Penn Courses*

*Feb. 2025 – Present*

- Maintain and extend production-grade web applications used by **10,000+** Penn students, contributing to a 6+ year-old monorepo with **4,000+** commits
- Implemented a new **"Breaks"** feature for course schedules using **React**, **Redux Toolkit**, and **TypeScript**

### Penn Spark

Philadelphia, PA

*Blue Developer, Project Lead*

*Aug. 2024 – Present*

- Led a team of 3 developers in designing and building a full-stack web product from the scratch over a semester
- Authored **30,000+** lines of code, contributing the majority of the project's frontend, backend, and infrastructure
- Managed weekly stand-ups and sprint planning to maintain consistent team progress using **Agile** methodologies

### University of Pennsylvania

Philadelphia, PA

*Teaching Assistant, CIS 1210 (previously, Rubrics Committee Head for CIS 1600)*

*Jan. 2024 – Present*

- Assist in teaching data structures and algorithms for **300+** students
- Acted as rubrics committee head for 10 members, delegating tasks and taking responsibility for rubric quality
- Lead recitation for 16 students, reviewing and teaching concepts to aid students' understanding

## PROJECTS

### Penn OS | C

- Built a user-level UNIX-like operating system from scratch with a shell, scheduler, and file system
- Implemented a command-line shell with job control, foreground/background execution, and signal handling
- Designed a round-robin process scheduler with context switching, PCBs, and support for zombies and orphans

### Bank Account Fraud Models | Python, Pandas, NumPy, PyTorch

- Performed EDA on **1,000,000+** account records to identify fraud indicators and clean imbalanced data
- Trained an XGBoost model with **73.9%** recall to prioritize minimizing undetected fraudulent transactions
- Used downsampling, SMOTE, and class weight adjustments to handle severe class imbalance in fraud labels

### Airbnb Clone | React + Vite, Tailwind CSS, Node.js, Express, MongoDB, Mongoose

- Built a responsive, production-style vacation rental platform with React + Vite
- Implemented secure user authentication with encrypted password storage through bcrypt and session handling via Express middleware
- Modeled relational data with MongoDB and Mongoose, ensuring schema validation and referential integrity

## COMMUNITY INVOLVEMENT

### INTEGIRLS

St. Louis, MO

*Co-founder, Executive Member*

*2021 – 2023*

- Hosted 3 annual math competitions for 100+ middle and high school competitors who identify as girls

### Rewriting the Code (RTC)

*Member*

*Mar. 2024 – Present*

## TECHNICAL SKILLS

**Languages:** Java, Python, C, JavaScript/TypeScript, SQL, HTML/CSS

**Frameworks/Tools:** React.js, Node.js, Express, Supabase, MongoDB, Mongoose, PyTorch, Linux, Git, Figma, Pandas, NumPy, Matplotlib