Mary Tsahas

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EDUCATION

Princeton University

Bachelor's of Science and Engineering *Expected May 2024*

Major: Computer Science *GPA: 3.81*

RELEVANT COURSEWORK

- Introduction to Algorithms and Data Structures
- Introduction to Programming Systems
- Introduction to Machine Learning
- Reasoning about Computation
- Advanced Programming Techniques
- Economics and Computing

EXPERIENCE

Intel **Remote**

Offensive Security Research Intern *June 2023 - August 2023*

- Researched hardware security threats like software-accessible power and frequency throttling side-channels
- Expanded functionality of internal validation and threat analysis software tool using C++
- Presented research and project contributions to Intel Product Assurance & Security team

Princeton-Intel REU **Princeton, NJ**

Researcher *June 2022 - August 2022*

- conducted research on Sequestered Encryption, a hardware solution to computer security vulnerabilities
- implemented design in Chisel with purposeful timing side channels to test formal verification systems
- presented research findings to Princeton professors and Intel security employees

Data Structures and Algorithms Course Staff **Princeton, NJ**

Precept Assistant *January 2022 - Present*

- attends weekly precepts and answers any questions students have while working through exercises
- explains topics like searching, sorting, interfaces, DFS, graphs, trees, tries, etc. to a class of 30 students

Princeton Tutoring **Princeton, NJ**

Tutor *October 2021 - Present*

- tutors middle school and high school students on a variety of subjects, including math and SAT/ACT

ZeusLN App **Remote**

Intern *June 2021 - August 2021*

- worked as an intern for Zeus, a start-up Lightning Node Bitcoin Wallet app
- coded a new feature allowing users to sign messages as they send payments
- learned basic JavaScript, React Native, and GitHub through weekly technical challenges

PROJECTS

Foreign Song Lyric Analysis Independent Work **Princeton, NJ**

January 2023 - June 2023

- performing analysis of the use of English in foreign songs, including Korean and Greek songs
- gathering and analyzing data using web scraping, Genius API, Python, etc.

Princeton iMuseum Web App **Princeton, NJ**

https://princeton-imuseum.onrender.com/login *September 2022 - December 2022*

- worked on a team of 5 to create a personal art hub using the Princeton Art Museum's art collection
- developed features allowing users to search/browse art pieces and save them to personalized collections
- used technologies like PostgreSQL, SQLAlchemy, Python, Flask, HTML, CSS, JavaScript, Ajax, and more

SKILLS

Computer: Java, C, Python, SQL, HTML, Javascript, Chisel, Verilog, Github, Data structures, Algorithms

Soft skills: Teamwork, adaptability, communication, empathy

Languages: English, Greek, Korean