Taisia Mertz

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Summary of Qualifications

- Junior at the University of Southern California (USC), Computer Science Major

Skills:

- Programming Languages: Python, C++, Java, Node.js, JavaScript, HTML/CSS, SQL
- Languages: English(fluent), Russian(fluent), Spanish(conversational)

Education

- University of Southern California Viterbi School of Engineering Class of 2025
- Rockville High School Class of 2021
    - Project Lead The Way Advanced Engineering Program (2014-2021)
    - Computer Science Program (2019-2021)

Professional Experience

Booz Allen Hamilton [Bethesda, MD]

Software Engineering Intern(June,2023-Present)

- Developed and maintained scalable publication tracking algorithm successfully flagging thousands of unreported publications for the NIDDK Central Repository team
- Aided in the development of AWS Service Workbench
- Collaborated with cross-functional teams, including product managers, designers, and QA engineers, to gather project goals, clarify requirements, and ensure the timely delivery of software products

USC Makers [Los Angeles, CA]

BioBotanic Project Manager(April,2023-Present)

- Leading a team of highly skilled engineering students in the development of a cutting-edge, self-automated greenhouse with features including a computerized irrigation system, light regulation, temperature and humidity control, nutrient monitoring and delivery, and remote monitoring and control
- Overseeing the project's development from ideation to launch, managing the project timeline and budget, coordinating with cross-functional teams, ensuring that the team stays on track, making critical decisions that drive the project forward that will, and eventually presenting results to our sponsors, Microsoft and Tesla

Paper AirPlayin' Mechanical Engineering Subteam(Sep,2022-May,2023)

- Utilized CAD software to design and prototype mechanical components for a lightweight remote control flight module that offers 3 degrees of motion and a customizable fit, ensuring optimal aerodynamics, physics, and modularity
- Employed 3D printing technology to manufacture precise and functional parts, resulting in a successful proof-of-concept prototype

1000 ecoFarms [Gaithersberg, MD]

Web Development Intern (March,2020-April,2021)

- Optimized the content flow of the mobile site, resulting in a more user-friendly and engaging experience for visitors
- Simulated and analyzed website usability from both customer and seller perspectives, identifying areas for improvement to enhance the user experience

The Catholic University of America [Washington, D.C.]

Mechanical Engineering Intern (July,2019-August,2019)

- Created chitosan-based bio-fabricated semipermeable biopolymer membranes using microfluidics housed in microfluidic devices
- Simulated cellular microenvironments to analyze stimulus effects on algae

Projects

- Hysteresis-Calculator: Python program written for the NICHD/DIR Section on Molecular Transport that performs the mathematical analysis of hysteresis behavior detected in voltage gating of large beta-barrel transmembrane ion channels
- UniLocker: Node.js platform aimed at connecting students in need of affordable storage options with those who have unused space during the summer months
- Budget Tracker: Visually captivating application developed using the MERN stack and intuitive data visualization tools