Serena Huang

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EDUCATION

University of Maryland, College Park *Expected May 2026*
Bachelor of Science in Computer Science
Bachelor of Science in Math

EXPERIENCE

Technica Tech Director *Nov 2023 - current*

- Lead a team of 9 to create scripts and websites for **Technica**, the world's largest **hackathon** for underrepresented genders
- Use **Github** to delegate tech related requests to team members and manage pull requests
- Deploy the websites and scripts using **AWS Amplify, Route 53,** and **IAM**
- Store vital hacker data to **DynamoDB tables** and **S3 buckets**
- Send out automated emails using **AWS Simple Email Service**
- Debug website backend using **AWS Cloud Watch** and through various types of user tests

University of Tennessee Undergraduate Researcher *May 2024 - Aug 2024*

- Worked alongside mentor, graduate students, and a research partner on **analog quantum neutron scattering simulations**
- Implemented **doppler damping** and **laser waist error** via **Qiskit** and **PennyLane** quantum computing python libraries
- Simulated and corrected for **SPAM error** via **matrix inverse methods**
- Ran neutron scattering simulations with error correction through **Aquila quantum computer** to experimental results with ideal

MAJOR PROJECTS

Technica Hackathon 2022 Oct 2022

- Led a team of 4 people to develop an application that guides college students through creating a balanced work-life routine using Python3
- Conducted thorough testing and debugging to identify and resolve 97% of character movement and collision-related bugs, ensuring a smoother user experience

International Baccalaureate Computer Science Extended Essay *2020 - 2022*

- Researched past and current types of **neural network** implementations for musical analysis
- Developed an AI to classify classical music into the four basic eras of Western Classical Music using Python's **TensorFlow** and **Pandas** libraries
- Extracted data from raw wav files through **Librosa** and combed through to find the best fit features for musical era classification
- Conducted experiments by changing the quantity of nodes in each layer and the total amount of layers to determine which structure of the neural network achieved the highest accuracy
- Compiled and analyzed data to ensure proper data training, getting accuracy of the neural network to over 75% on test data

TECHNICAL SKILLS

Python, Java, C, x86 Assembly, JavaScript, AWS, Matlab, HTML/CSS, Bootstrap 5, TensorFlow, Vue, Git, VIM, Jupyter Notebook, Google Workspace, Microsoft Office Suite, PC Building