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 Organizer *Apr 2023 - Nov 2023*

- Worked on a team with 11 other organizers to create three different websites for Technica, the world's largest hackathon for underrepresented genders in tech
- Developed web-based registration using VUE3 with links to an AWS database
- Updated the day-of website using VUE2 to better fit this year's theme
- Eliminated 70% of the issues with resizing through implementing Bootstrap 5, making the website accessible to devices and monitors of all sizes.
- Worked closely with the design team to translate mockups into visually appealing interfaces
- Documented website creation and maintenance weekly through GitHub

Machine Learning New York University Tandon Summer Program *May 2019 - July 2019*

- Learned core ML principles such as model development through **cross-validation, linear regressions, neural networks, and K-clustering**
- Learned importance of analyzing false positives and negatives when analyzing results through working with the **Breast Cancer Wisconsin** dataset and the **scikit-learn** python library
- Trained basic **convolutional neural networks** on famous datasets like the **MNIST dataset and the CIFAR10 dataset**
- Experimented with different python libraries to make creation of NN's easier, including **TensorFlow, Pandas, Numpy, Keras**

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