Jerry Liu

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Work Experience

- **Software Engineering Intern** **Bethesda, MD**
  Leidos *May 2021 - Present*
  Worked on the All-World Environment Simulation (AWESIM) project, an algorithm that creates a high-fidelity physics-based simulation of the generation and propagation of acoustic signals in the ocean for sonar trainers in the U.S. Navy. Wrote and debugged code in C++, Python, and React.js. Followed the agile methodology with a Jira Kanban Board and used the Conan C++ package manager, RESTful web services, Jenkins, and Kubernetes.
- **Teaching Assistant for CS 3330** **Charlottesville, VA**
  University of Virginia *Feb. 2021 – Present*
  Assisted students with understanding computer architecture concepts and the MIPS assembly language. Hosted weekly office hours, cohosted lab sections, and answered questions on Piazza.

Skills

- **Programming Languages:** Python, Java, C++, C, JavaScript, HTML, CSS, SQL, C#, Bash, MATLAB, x86 Assembly
- **Libraries:** React.js, NumPy, Matplotlib, Scikit Learn, TensorFlow, Keras, PyTorch, OpenCV, Pandas, Seaborn
- **Tools:** Visual Studio Code, Eclipse, Vim, JUnit Testing, GitHub, VirtualBox, Conan C++ Package Manager, Docker, Kubernetes, Jenkins, Jira, Django, Heroku, Jupyter Notebook, Wireshark
- **Operating Systems:** Linux, Windows

Education

University of Virginia **Charlottesville, VA**
Bachelor of Science in Computer Science *Aug. 2019 – May 2023*

- **Cumulative GPA:** 3.99 **Major GPA:** 3.98 (Dean's List)
- **Relevant Coursework:** Operating Systems, Databases, Mobile Application Development, Advanced Software Development Techniques, Computer Networks, Artificial Intelligence, Intro to Computer Vision, Computer Architecture, Machine Learning, Algorithms, Theory of Computation, Program and Data Representation, Discrete Math, Ordinary Differential Equations, Probability Theory, Linear Algebra, Mathematics of Information, Statistics
- **Extracurricular Activities:** Computer and Network Security Club, Machine Learning Club, ICPC, Google Developer Student Club, Student Game Designers, Table Tennis Club

Thomas Jefferson High School for Science and Technology **Alexandria, VA**
Advanced Studies Diploma *Sep. 2015 – Jun. 2019*

- **GPA:** 4.53
- **Relevant Coursework:** AP Computer Science A plus Data Structures, AP Calculus BC, AP Physics C, Multivariable Calculus, Linear Algebra, Artificial Intelligence, Parallel Computing, Computer Vision, Computer Systems Research
- **Awards and Honors:** National Merit Scholar, National AP Scholar
- **Extracurricular Activities:** Computer Team, Machine Learning Club, Computer Security Club, Cross Country

Research

- **An Investigation into using Data Poisoning and PGDAttack during Adversarial Training** **Charlottesville, VA**
  University of Virginia *Jun. 2020 – Sep. 2020*
  Analyzed different combinations of data poisoning and PGDAttack in adversarial training of a linear SVM to investigate if the two adversarial methods amplify or hinder each other.
- **Chess Game Tracking via Computer Vision & Deep Learning** **Alexandria, VA**
  Thomas Jefferson High School for Science and Technology *Aug. 2018 – May 2019*
  Developed project on chess game tracking through computer vision and deep learning using a custom dataset and a Convolutional Neural Network. Implemented the Keras, TensorFlow, and OpenCV Python libraries.