

Jerry Liu

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Education

University of Virginia, Charlottesville, VA

08/2019 – 05/2022

- **Major:** Computer Science (B.S.) **Minor:** Applied Math
- **Cumulative GPA:** 3.981 **Major GPA:** 3.967 (Dean's List)
- **Relevant Coursework:** Computer Architecture, Machine Learning, Algorithms, Theory of Computation, Computer Game Design, Program and Data Representation, Digital Logic Design, Discrete Math, Software Development Methods, Ordinary Differential Equations, Probability Theory, Linear Algebra
- **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

08/2015 – 05/2019

- **GPA:** 4.53 (Advanced Studies Diploma)
- **Relevant Coursework:** AP Computer Science A plus Data Structures, AP Calculus BC, AP Physics C, Multivariable Calculus, Linear Algebra, Artificial Intelligence 1 & 2, Parallel Computing 1 & 2, Computer Vision 1 & 2, Computer Systems Research Lab
- **Awards and Honors:** National Merit Scholar, National AP Scholar
- **Extracurricular Activities:** Computer Team, Machine Learning Club, Computer Security Club, Cross Country

Work Experience/Research

- **Teaching Assistant for CS 3330** 02/2021 – Present
School of Engineering and Applied Science, University of Virginia
Assisted students with understanding computer architecture concepts and the MIPS assembly language. Hosted weekly office hours, cohosted lab sections, and answered questions on Piazza.
- **An Investigation into using Data Poisoning and PGDAttack during Adversarial Training** 06/2020 – 09/2020
UVA Security Research Group, University of Virginia
Analyzed different combinations of data poisoning and PGDAttack in adversarial training of a linear SVM using the MNIST 1/7 dataset to investigate if the two adversarial methods amplify or hinder each other during a PGDAttack and entered the corresponding test accuracies to Google Sheets. This project introduced me to cybersecurity in machine learning and how to operate in a research group.
- **Chess Game Tracking via Computer Vision & Deep Learning** 08/2018 - 05/2019
Computer Systems Senior Research Lab, TJHSST Alexandria, VA
Developed project on chess game tracking using computer vision and deep learning, implementing the Keras, TensorFlow, and OpenCV libraries, using a custom dataset and CNN architecture. Learning from the project introduced me to the basics of computer vision and machine learning.

Projects

- (Sep 2020 – Dec 2020) – Group project for Machine Learning class about predicting car crash severity using traffic data
- (Sep 2020 – Dec 2020) – Group project for Computer Game Design class of a 2d Portal Game created using Unity and written using C#

Skills

- **Programming Languages:** Java (5+ years), Python (4+ years), C++ (4+ years), C (4+ years), HTML (3+ years), JavaScript (3+ years), CSS (3+ years), x86 Assembly (2+ years), Bash (2+ years), R (1+ years), C# (1+ years), SQL (1+ years)
- **Tools:** Eclipse, Visual Studio Code, Vim, Nano, JUnit Testing, GitHub, Unity, Jupyter Notebook, Scikit Learn, Matplotlib, OpenCV, TensorFlow, Keras, Pandas, Seaborn, React, Django, Virtual Box, MATLAB, Mathematica
- **Operating Systems:** Linux, Windows

Certificates

- Coursera: Structuring Machine Learning Projects – 08/19/20
- Coursera: Improving Deep Neural Networks – 08/16/20
- Coursera: Neural Networks and Deep Learning – 08/09/20
- Coursera: R Programming – 07/31/20
- Coursera: The Data Scientist's Toolbox – 07/21/20