Travis Zhang

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EDUCATION

Hamilton High School, Chandler, AZ | July 2016 – May 2020
- Weighted GPA: 4.927/4.0, Unweighted GPA: 4.0/4.0

Cornell University, Ithaca, NY | Sep 2020 – May 2024
- B.S. in Computer Science

EXPERIENCE

- ASU Robust Machine Learning Group Internship (12)
- Information Technology Technical Support Specialist (11-12)
- University of Central Florida's Competitive Programming Camp (10)
- ASU Signal, Information, Networks, and Energy Laboratory Internship (10)
- CodeDay Hackathon (10)

INDEPENDENT PROJECTS

Adversarial Attacks Against Reinforcement Learning Algorithms (12-Present)
- Developing perturbations on objects within an environment to attack a fully-trained RL agent

Improving Model Robustness with Transformation-Invariant Attacks (12)
- Applying transformation-invariant constraints on adversarial training to improve a CNN's chance of correctly learning robust features. Implementing a variety of algorithms to reduce the computational cost during adversarial training.

Skin cancer diagnosis using Neural Networks (11)
- Using Convolutional Neural Networks and Generative Adversarial Networks to increase accuracy in computer diagnosis of skin cancer diagnosis.

Electricity and the Electrical grid (9, 10)
- Understanding effect of temperature on power outputs in solar panels. Designed a program to predict power outputs of solar panels using temporal and spatial interpolation.

ACTIVITIES & LEADERSHIP

- Science Research (9-12)
    - Participated at multiple science fair competitions; Gave presentations to judges about science research project
- Hamilton Robotics Team (9-12), *Head of Electrical Team (11,12), Head of Communications (12)*
    - Designed parts of robot using CAD software; Programmed robot; Recruited & trained 40+ Hamilton members
- Hamilton National Honor Society (11, 12), *Officer (11), President (12)*
    - Led meetings for 400+ members; Managed over 12,000 volunteer hours; Organized multiple charity events
- Robotics Volunteering (9-12), *Lead Mentor (11, 12)*
    - Taught URM students from Title 1 schools programming and robot-building process
- CUSD Equity Symposium (11, 12), *Lead App Designer (11, 12)*
    - Led the development of the school district's first Android and iOS app
- Hamilton Science Olympiad (11, 12), *Secretary (12)*
    - Organized meetings to prepare 2 teams for build and test events for the Science Olympiad competition
- Mathworks Math Modeling Challenge (11, 12), *Team Leader (12)*
    - Developed mathematical models to solve real-world problems; Led weekly meetings to discuss past papers

TECHNICAL/COMPUTING SKILLS

- Java, Python, Tensorflow, Keras, Swift , Pytorch, C++, HTML, CSS, Autodesk Inventor, Solidworks CAD

HONORS AND AWARDS

- Association of Chinese American Physicians Bronze Prize (12)
- Top 20% in the Nation for Mathworks Math Modeling Challenge (11)
- Arizona Science and Engineering Fair 3rd place (11)
- AP National Scholar (10, 11)
- Science Student of the Year (9, 10)
- Arizona Science and Engineering Fair 3rd place (9)
- Arizona Junior Science and Humanities Symposium 2nd place (9)