Travis Zhang

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EDUCATION

Hamilton High School, Chandler, AZ — July 2016 – May 2020
- Weighted GPA: 4.927/5.0, Unweighted GPA: 4.0/4.0
- ACT: 36; Math: 36, Science: 36, Reading: 35, English: 35
- **Courses:** Multivariable Calculus, Differential Equations, Linear Algebra, AP Java, AP Physics C: Mechanics and E & M

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

TECHNICAL/COMPUTING SKILLS

- Java, Python, Tensorflow, Keras, Swift, Pytorch, C++, HTML5, CSS3, Autodesk Inventor, Solidworks CAD

EXPERIENCE

- HackOurCampus Hackathon — Aug 2020
  - Developed iOS Geofencing app that reminded students to bring both COVID-related and personal items
- ASU Robust Machine Learning Student Researcher — April 2019 – Present
  - Applied transformation-invariant constraints on adversarial training using Tensorflow to improve CNN performance. Implemented a variety of algorithms to reduce the computational cost during adversarial training.
  - Designed and implemented optimization algorithms in Pytorch to fool a Deep RL agent in a realistic scenario.
- University of Central Florida's Competitive Programming Camp — June 2017
  - Learned about various competitive programming algorithms including Dijkstra's algorithm and Prim's algorithm; Competed in 5+ programming competitions at the camp
- ASU Signal, Information, Networks, and Energy Laboratory Student Researcher — Sep 2017 – April 2018
  - Designed program to temporally and spatially interpolate power outputs of solar panels of households in various locations using various python libraries (pandas, numpy, matplolib)
- Hamilton Robotics Team, *Head of Electrical Team, Head of Communications* — Aug 2016 – May 2020
  - Designed parts of robot using CAD software; Programmed robot using Java and FRC WPI Library; Recruited & trained 40+ Hamilton members
- Robotics Volunteering, *Lead Mentor* — Aug 2016 – May 2020
  - Taught URM students from Title 1 schools programming and robot-building process
- Mathworks Math Modeling Challenge, *Team Leader* — Jan 2019 – Feb 2020
  - Developed and implemented mathematical models to solve real-world problems; Wrote a 15+ page research paper to report experimental designs and results

PROJECTS

National Honor Society App — July 2019 – Jan 2020
- Developed both the iOS and Android mobile application for Hamilton's NHS club; Developed and incorporated Google Firebase to create a personalized experience for users

CUSD Equity Symposium App — Nov 2018 – May 2020
- Developed iOS app for the Chandler school district's annual equity symposium

Skin Cancer Diagnosis using Neural Networks — Aug 2018 – April 2019
- Built Convolutional Neural Networks (CNNs) and Generative Adversarial Networks in Keras + Tensorflow to improve computer diagnosis of skin cancer.

HONORS AND AWARDS

- Association of Chinese American Physicians Bronze Prize (Nov 2020)
- Arizona Science and Engineering Fair 3rd place (April 2019)
- Arizona Science and Engineering Fair 3rd place (April 2016)
- Arizona Junior Science and Humanities Symposium 2nd place (April 2016)