Alice Zhang

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EDUCATION

University of Texas at Austin	08/2022 –
MS/PhD, Electrical Engineering	expected 2027
Human Signals Lab	Advisor: Prof. Edison Thomaz	
Cockrell School of Engineering Fellowship Recipient	
Georgia Institute of Technology	08/2016 – 05/2020
BSc, Electrical Engineering, GPA: 3.85/4.00	

PROFESSIONAL EXPERIENCE

Applied Research Laboratories at University of Texas at Austin   06/2020 – 08/2022
Engineering Scientist Associate

- Developed FPGA firmware for software-defined receivers to monitor status of navigation satellites
- Implemented digital logic for ASICs; developed and executed test plans that caught correlation errors
- Wrote a Python pipeline to generate reports with data collected from ground receivers and continuously analyzed the reports, resulting in discovery of hardware bugs in the receivers

Georgia Tech School of Mathematics | Undergraduate Math TA   08/2019 – 05/2020

- Led weekly problem-based studio session with 30+ students for calculus and linear algebra
- Provided additional support to students in office hours and review sessions

Garmin | Design Engineer Intern   05/2019 – 08/2019

- Wrote VHDL testbenches to verify SPI communication between FPGA and bus functional models
- Designed hardware in adherence to FAA requirements and industry standards for avionics

RESEARCH EXPERIENCE

Center for Translational Research in Neuroimaging & Data Science   09/2019 – 03/2020
Student Researcher

- Trained neural networks and Gaussian process regression models to predict an individual's brain age from MRI images of the brain

Bio-Interfaced Translational Nanoengineering Lab | Student Researcher   01/2018 – 12/2018

- Fabricated silicone-based conductive and magnetic elastomers for flexible, wearable electronics

COMPLETED PROJECTS

HW/SW Co-design of an Embedded SoC | C, SystemC, Verilog   12/2021

- Optimized and prototyped a CNN model for visual object detection on an ARM/FPGA board

PUBLICATIONS

Predicting Brain Age Using Functional Network Connectivity: A Deep Neural Network Method
Sendi, M., Jacob. J., *Zhang A.,* et al. (2020). Poster session presented at the annual meeting of the Organization for Human Brain Mapping, Montreal, Canada.

MENTORING EXPERIENCE

2022 Applied Research Labs Summer Apprentice Program: Kevin W. (undergraduate)

SKILLS

Languages: Python, MATLAB, C/C++, Verilog, VHDL, Tcl, bash
Software & Platforms: TensorFlow, NumPy, Librosa, git, Linux, CI/CD pipelines, Vivado HLS, OpenLane
Hardware: FPGAs, Microcontrollers, Spectrum and Logic Analyzers, Function Generators, Oscilloscopes

COMMUNITY SERVICE

Volunteer English Teaching Assistant. Interfaith Action Central Texas, 2021 – present
Volunteer EMS First Responder. ARL:UT EMS Team, 2021 – 2022