

Alice Zhang

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EDUCATION

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

PROFESSIONAL EXPERIENCE

Applied Research Laboratories at University of Texas at Austin Engineering Scientist Associate	06/2020 – 08/2022
<ul style="list-style-type: none">Developed FPGA firmware for software-defined receivers to monitor status of navigation satellitesImplemented digital logic for ASICs; developed and executed test plans that caught correlation errorsWrote 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
<ul style="list-style-type: none">Led weekly problem-based studio session with 30+ students for calculus and linear algebraProvided additional support to students in office hours and review sessions	
Garmin Design Engineer Intern	05/2019 – 08/2019
<ul style="list-style-type: none">Wrote VHDL testbenches to verify SPI communication between FPGA and bus functional modelsDesigned hardware in adherence to FAA requirements and industry standards for avionics	

RESEARCH EXPERIENCE

Center for Translational Research in Neuroimaging & Data Science Student Researcher	09/2019 – 03/2020
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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

Software: Python, TensorFlow, MATLAB, C/C++, Verilog, VHDL, Tcl, bash, git, CI/CD pipelines
Tools: Vivado HLS, OpenLane, LabVIEW, Mathcad, Multisim, LTSpice
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