Alice Zhang
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EDUCATION

University of Texas at Austin 08/2022 – expected 2027
MS/PhD, Electrical and Computer Engineering | 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

RESEARCH EXPERIENCE

Human Signals Lab | TensorFlow, Android Studio 08/2022 – present

- Train neural networks with audio and inertial data for human activity recognition
- Develop Android applications for data collection and deployment of neural networks to edge devices

Center for Translational Research in Neuroimaging & Data Science | TensorFlow 09/2019 – 03/2020

- 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 | Elastomer fabrication 01/2018 – 12/2018

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

PROFESSIONAL EXPERIENCE

Bose Corporation | Software Engineering Intern 06/2023 – 08/2023

- Deployed TensorFlow Lite model to microprocessor for acoustic noise cancellation in audio wearables

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

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

COMPLETED PROJECTS

Timelapse Generation using Generative Adversarial Network| PyTorch 05/2023

- Trained a GAN to generate video timelapses of flowers blooming

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

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

PUBLICATIONS

1. Automated Face-To-Face Conversation Detection on a Commodity Smartwatch with Acoustic Sensing
Liang D., *Zhang A,.* Thomaz, E. (2023). Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies.

2. 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.

SKILLS

Languages: Python, MATLAB, C/C++, Verilog, VHDL, Tcl, bash
Software & Platforms: TensorFlow, NumPy, Android Studio, git, Linux, CI/CD pipelines, Vivado, 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