

# Linrui Jiang

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## EDUCATION

### The University of Texas at Austin

M.S. in Electrical and Computer Engineering

Austin, USA

Start at Aug. 2024

### University of Electronic Science and Technology of China

B.Eng. with Merit in Electronic Science and Technology

Chengdu, CHN

Sept. 2020 - June 2024

- Advisor: [Prof. Jun Zhou](#)
- GPA: 3.95/4.00 | Weighted Average: 92/100 | Ranking: 3/158 | ECE-Only GPA: 4.00/4.00

## RESEARCH EXPERIENCE

### AIoT Smart ICs & Systems Lab @ UESTC

Research Intern, Advisor: [Prof. Jun Zhou](#)

Chengdu, CHN

Oct. 2023 - Present

- **ARM-FPGA Co-designed Frameworks**
  - Designed a speaker recognition framework on the Xilinx heterogeneous acceleration SoC. Built, trained and optimized a hardware-friendly probabilistic linear discriminant analysis (PLDA) on the ARM core; designed an FPGA accelerator to further accelerate the algorithm.
  - Reduced the algorithm's Equal Error Rate (EER) from **14.22% to 0.78%** in the second edition.

### Efficient & Intelligent Computing Lab @ Georgia Tech

Research Intern, Advisor: [Prof. Yingyan \(Celine\) Lin](#)

Atlanta, USA

May 2023 - Oct. 2023

- **A Generalized Neural Radiance Field Accelerator for Edge AR/VR**
  - Proposed a measurement method for the CPU, GPU, DSP and NPU performance on the Snapdragon 8 Gen 2 Mobile Platform. Implemented the framework first in a Docker container and then using Android Studio IDE with the Qualcomm Innovators Development Kit (QIDK) repository.
  - Utilized the Neural Processing SDK for AI to run neural networks on edge devices. Employed AI Engine Direct SDK to invoke Qualcomm accelerators. Applied AI Model Efficiency Tool Kit to compress algorithm models for higher efficiency and lower latency.
  - Obtained positive feedback and device support from the Qualcomm QIDK and QNN Team.

### Nanovisualization Research Group @ KAUST

Visiting Student, Advisor: [Prof. Ivan Viola](#)

Thuwal, SAU

June 2022 - July 2022

- **Algorithms Optimization in a Game Design Project**
  - Reconstructed the Chrome Dino game on a platform called Shader Editor using the Web GPU Shading Language. Designed the game for fast response and precise detection. Proposed a two-step solution for collision detection, which combines Bounding Box (first step) and Detailed Rectangles (second step).
  - Implemented the optimized algorithms to reduce the number of Detailed Rectangles that need to be activated. Reduced the react time from **94ms to 27ms, achieving real-time reaction.** [\[Demo\]](#)

## LEADERSHIP & SERVICES

### Diversity Support Event

Lead Student

Chengdu, CHN

Sept. 2022 - Present

- Led a peer volunteer support group to assist over 120 students (mainly underrepresented groups: Women in STEM & First-generation college students) applying to graduate programmes.
- Committed 1 to 2 hours per week to provide guidance, suggestions and mentorship with 8 partners. To date, they received offers/admission letters from prestigious universities: Stanford (×1), Georgia Tech (×1), UCSD (×2), UVA (×1) and more. [\[Details\]](#)

## HONORS & AWARDS

Merit Graduate Scholarship, top 5%, UESTC

June 2024

Excellent Student Scholarship, top 10%, UESTC

Dec. 2022, Dec. 2023

China National Scholarship, top 1%, Ministry of Education of the PRC

Dec. 2022

Academic Outstanding Scholarship, top 15%, School of ESE

Dec. 2021

## SKILLS

Programming Language: C/C++, Python, Java, Verilog; MATLAB,  $\text{\LaTeX}$

Development Tool: Android Studio, Docker, Linux; Keil, Altium Designer, Vivado

Experience: Cleanroom (In 2023 Spring Semester)