

JIAYI QIAN

Phone: (404)4522566 Email: jiaiyiqian@gatech.edu

EDUCATION

Georgia Institute of Technology
Department of Computer Science
Master of Science in Computer Science

Georgia, USA

08/2023-

Tsinghua University
Department of Electronic Engineering
Bachelor of Science in Electronic Information Science and Technology

Beijing, China

08/2019- 07/2023

WORK EXPERIENCES

A4x AI

Beijing, China

Algorithm Intern, Advisor: Mr. Chu Tang

06/2022- 08/2022

- **Project: Real-time Cry Detection Based on DL Methods (MobileNetV1 and ResNet50)**
 - Collected a cry data set with more than 2000 pieces of cry audio and corresponding 2000 pieces of non-crying voice data
 - Implemented 'Grayscale' spectrogram for classification
 - Designed an offline test program for false trigger rate test;

Georgia Institute of Technology

Georgia, USA

Graduate Teaching Assistant, Advisor: Prof. Xiuwei Zhang

01/2024-05/2024

- **Course: CSE 6140: Computer Science & Engineering Algorithms**
 - Conducted office hours to provide guidance and support to students.
 - Designed questions for exams, homework, and projects to assess students' understanding of course material.
 - Responsible for grading assignments and exams.

RESEARCH EXPERIENCES

Research Intern in Computer Science Department, Georgia Institute of Technology

Georgia, USA

Developer, Advisor: Prof. Yingyan(Celine) Lin

09/2023-

- **Topic: Model Compression for Large Language Models (on going)**
 - Engaged in data generation and preprocessing to optimize datasets for model training
 - Conducted fine-tuning of models to improve efficiency and performance.

Student Research in Electronic Engineering Department, Tsinghua University

Beijing, China

Developer, Advisor: Dr. Gang Liu

10/2022- 06/2023

- **Topic: Visual SLAM technology based on trusted visual features**
 - Combine Deep Learning feature extraction methods with traditional SLAM system.
 - Developed SuperPoint-based Visual SLAM system based on ORB-SLAM3 and reached 20 times accuracy than ORB-SLAM3 Mono.
 - Developed multi-feature fusion Visual SLAM system based on ORB-SLAM3

Student Research Training program in IIS, Tsinghua University

Beijing, China

Developer, Advisor: Prof. Jian Yu Chen

04/2022- 04/2023

- **Project: Foot-mounted Robot Hardware Circuit Design SRT**
 - Helped develop controller area network for foot-mounted robot
 - Implement communication between multiple devices based on LCM (Lightweight Communications and Marshalling)
 - Developed a test program to test the reliability and speed of communication

JIAYI QIAN

Phone: (404)4522566 Email: jiayiqian@gatech.edu

Student Project in ICenter, Tsinghua University

Developer, Advisor: Prof. Zhen Chen

Beijing, China

04/2022-07/2022

- **Pull-up Counting System Based on Real-time 2D Multi-Person Pose Estimation**

- Developed an offline testing program in Pull-up counting based on OpenPose Model which was the first real-time multi-person system to jointly detect human body, hand, facial, and foot keypoints (in total 135 keypoints) on single images.
- Designed a Finite State Machine to describe the procedure of pull-up
- Implemented OpenPose pre-trained model on the FSM system to count pull-up
- Developed graphical user interface for the program

PROJECTS

Developer, Advisor: Prof. Xueqing Li

03/2021-07/2021

- **Coursework of Fundamental Experiment of Digital Logic and Processor: Design of Pipelined MIPS Processor**

- Developed a 5-stage pipelined MIPS Processor with Verilog to solve a dynamic programming problem.
- Solved data association problem with a complete forwarding circuit.

Developer, Advisor: Prof. Xiaowei Cui

11/2021-01/2022

- **Coursework of Digital Signal Processing: Detection and Identification of DTMF Signals, C++ Implementation of the FFT Algorithm**

- Developed a program with C++ to Implement the DIT-FFT (Cooley-Tukey Algorithm) and DIF-FFT (Sander-Tukey Algorithm)
- Developed a system for DTMF identification with this FFT Program

Developer, Advisor: Prof. Zhen Chen

03/2022-06/2022

- **Coursework of Big Data and Machine Intelligence: TensorFlow-based Spectrogram classification**

- Finished Data collection and augmentation
- Constructed ResNet and Vgg16 with TensorFlow for classification

SKILLS

- **Programming Languages:** Proficient in C++, Python, Shell, VHDL and Verilog HDL, Matlab.
- **Machine Learning:** Proficient in Pytorch, Tensorflow, Keras
- **Software Tools:** LTspice, Multisim