JINJIE LIU

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https://sgjzfzzf.github.io

EDUCATION

University of Southern California, Viterbi School of Engineering 12/2023-present

Master of Computer Science, Expected in June 2025, GPA: 4.0/4.0 Los Angeles, US

University of Texas at Austin, College of Natural Science 09/2022-12/2022

Exchange Study, GPA: 3.9/4.0 Austin, US

Shanghai Jiao Tong University, School of Electronic Information and Electrical Engineering 09/2019-06/2023

Bachelor of Engineering in Information Security, GPA: 3.6/4.3 Shanghai, China

- Honor: University Merit Scholarship Top 10%, 2020-2021, 2021-2022

RESEARCH

FluidML: Fast and Memory Efficient Inference Optimization 01/2024-present

Student Research Assistant, Supervisor: Hang Qiu Los Angeles, US

- Worked on accelerating model inference on CPUs with faster speed and more efficient memory usage. It proposes to minimize the peak memory overhead with a static memory allocator and a greedy-by-size algorithm and increase the inference speed by dynamic programming.
- Produced a publication submitted to MLSys2025.

CPU-FPGA TEE: Research on Heterogeneous Trusted Executable Environments Across Devices 12/2022-06/2023

Student Research Assistant, Supervisor: Dawu Gu Shanghai, China

- Built a trusted executable environment based on Intel SGX and FPGA PUF, which protected the transmission between the CPU side and the FPGA side.
- Conducted this research for my bachelor's graduate thesis.

Side Channel Leakage Detection and Attack 06/2022-09/2022

Student Research Assistant, Supervisor: Dawu Gu Shanghai, China

- Responsible for implementing a side channel leakage detector based on chi-squared test.

Gnark-based Distributed Authentication System Implementation 09/2021-06/2022

College Students Innovation and Practicum Competition, Supervisor: Lei Fan Shanghai, China

- Implemented a decentralized authentication system by using zero-knowledge proof technology based on Gnark.

A Hierarchical Attention Translation Model for Paragraph Aligned Corpus 09/2021-06/2022

Software Development Engineer, Group Project, Supervisor: Gongshen Liu Shanghai, China

- Responsible for developing Android server and programs.

INTERNSHIP

Momenta 08/2023-12/2023

Software Development Intern Beijing, China

- Responsible for integrating different perception models and optimizing the performance of perception inference on the car chips.
- Contributed to a framework that could evaluate the correction and performance of the perception inference.

Naïve Systems 03/2023-06/2023

Software Development Intern Shanghai, China

- Responsible for developing a static code analyzer to detect potential bugs in C/C++ codes based on LLVM.

PUBLICATION

FluidML: Fast and Memory Efficient Inference Optimization, <u>Jinjie Liu</u>, Hang Qiu, MLSys 2025(submitted and available on <u>Arxiv</u> now)

<u>PATENT</u>

Jinming Guo, Xinhao Zheng, Xinran Chen, Jinyao Guo, **<u>Jinjie Liu</u>**, Qin Liu, Gongshen Liu, CorpusConstruction and Filtering Methods and System, CN114780667A, Jul 22, 2022