
Zhenyu Liu

(+86)187-9055-6355 lzy001225@outlook.com [Personal Website](#)

Address: No. 4, Sec. 2, North Jianshe Rd., Chengdu, China, UESTC

Education Background

University of Electronic Science and Technology of China, Chengdu, China Sept. 2019- Jul. 2023(Expected)

- Bachelor of Engineering in Software Engineering (Elite Program), GPA:3.92/4.0
- Core Courses: Cloud Computing (96/100), Artificial Intelligence (93/100), Operating System (92/100), Big Data Analysis and Intelligence Computing (91/100), Compiling Technique (90/100), Probability and Mathematical Statistics (90/100)

Honors and Scholarships

- 2021, National Second Prize of China Computer Design Competition
- 2021, Provincial First Prize of China College Students' 'Internet+' Innovation Competition
- 2019&2020, Second Class Scholarship (Top 10%)

Publication

- Wei Jiang, Chen Bian, Jinyu Zhan, **Zhenyu Liu**, Hong Lei, Ziwei Song and Xiangyu Wen, "Self-Organizing and Parallel-Process Driven Fast Generation of Adversarial Examples for 3D Point Clouds", Design Automation Conference 2022 - Poster

Research Experience

Transformer-based GAN for Sketch-to-Point Cloud Generation

Jan. 2022 - Present

Advisor: Wei Jiang, Associate Professor, MobileAI Lab, UESTC

- Designed a new transformer-based sketch feature extractor for the initialization of the point cloud
- Proposed a new fast GAN architecture of point cloud
- Deployment on the hardware platform with limited computing resources

Fast Generation of Adversarial Examples for 3D Point Clouds

Aug. 2021 - Feb. 2022

Advisor: Wei Jiang, Associate Professor, MobileAI Lab, UESTC

- Designed a global feature extraction network to process point cloud input with group coding to speed up the coding process and reduce the resource usage
- Proposed a dual-process point cloud restoration network to generate point clouds with adversarial properties
- Finally, achieved up to 511% faster with only 34.19% GPU resource usage comparing with existing methods. And increase up to 12% in success rate of attacking unseen networks.
- Paper published on Design Automation Conference 2022

Quantization and Efficient Deployment of Neural Networks

Dec. 2020 - Dec. 2021

Advisor: Jinyu Zhan, Associate Professor, MobileAI Lab, UESTC

- Used Binary Neural Network for quantization
- Designed pipelining and data parallelism for hardware to improve inference speed
- Verified the solutions on Xilinx's Zynq UltraScale+ MPSoC ZCU102 board and deployed a neural network for analyzing radar echoes on ZED-7020 with limited computing resources
- Finally reduced both the energy consumption and the circuit areas significantly without affecting the performance

Skills and Others

Language: Chinese (Native)

Computer and Framework and Tools: Python, PyTorch,SQL,C,Java,R, LATEX, Git, TensorFlow.