# ZHIYU NI

University of Southern California

Email: zhiyuni@usc.edu      Tel: (+1)323-633-1447

## EDUCATION

**University of Southern California**                                          *Los Angeles, United States*
Ph.D. *Electrical Engineering*                                                          *2022.8 - Present*
Advisor: Pierluigi Nuzzo

**University of Science and Technology of China (USTC)**                              *Hefei, China*
B.S. *Physical Electronics*                                                               *2018.8 - 2022.6*
Outstanding Graduates

## SKILLS

Programming
Python, PyTorch, TensorFlow, C, Matlab, Unix shell, Assembly Language, LaTeX

## RESEARCH EXPERIENCE

**University of Southern California**                                          *Los Angeles, United States*
Research Assistant, *Department of Electrical Engineering*                              *2022.8 - present*
Research Direction: Side Channel Analysis and Deep Learning

- Enhancing the Advanced Encryption Standard (AES) to safeguard against deep learning-driven side-channel attacks.
- Developing a more resilient model for novel non-profiling deep learning technique for side-channel attacks.
- Introducing an advanced profiled deep learning approach capable of successfully targeting the ASCAD_V2 dataset with a less stringent assumption on random masks.

## WORK EXPERIENCE

**iFlytek**                                                                                *Hefei, China*
Machine Learning Engineer Intern, *AI Research Institute*                               *2022.2 - 2022.6*

- Independently carried out machine translation tasks utilizing large mixed-language model (LLM) for seamless bidirectional translation among English, German, Italian, and Portuguese languages.
- Surpassed Google Translation by attaining a superior BLEU score, demonstrating exceptional translation performance.

## PROJECTS

Image Segmentation of Seismic Fault

- Employed Convolutional Neural Networks (CNN) for precise fault segmentation in seismic imaging.
- Championship in the final project on Kaggle

Immersive Remote Communication System Design

- Spearheaded a team in the creation of a remote communication system.
- Conceived and engineered hardware and software components to ensure seamless system functionality.