Qiulu Peng

1-(513) 599 9988 | qiulup@andrew.cmu.edu | pengqiuluuu.github.io

EDUCATION

Carnegie Mellon University Pittsburgh, PA

Master of Science in Artificial Intelligence Engineering - ECE 08/2023-12/2024(expected)

- GPA: 3.90/4.0
- Courses: Trustworthy AI, Deep learning, AI System&Tool Chains

University of Cincinnati Cincinnati, OH

Bachelor of Science in Electrical Engineering 09/2022-06/2023

- GPA: 3.74/4.0
- Courses: Industry AI and big data, Intelligent System, Digital Image Processing

Chongqing University Chongqing, China

Bachelor of Engineering in Electrical Engineering and Automation 09/2018-06/2023

- GPA: 87.2/100
- Courses: Modeling, Calculus, Semiconductor, Prob&Stat, Machine Learning

RESEARCH PROJECTS

Carnegie Mellon University

Robustness of Code LLMs to Random Perturbations w.r.t Functional Correctness

Advisor: Limin Jia

- Evaluate robustness of code LLMs w.r.t code functionality using random perturbations. Evaluate random semantics-preserving perturbations cause the LLM to produce functionally incorrect code.

Evasion Attack on LLMs

Mentor: Weiran Lin

- This project explored two methods of evasion attacks: a white box attack based on SALSA score and a prompt-based attack. The project specifically targets the Transformer structure models.

University of Cincinnati

Bi-Level Clustering Model to Maximize the Profits of Demand Response Aggregators in Electricity Markets

Senior Capstone Project

- Developed a bi-level clustering model to maximize the profits of demand response (DR) in electricity markets. Responsible for machine learning algorithm and implementation.
- The model was designed to increase the economic benefits of DR aggregators under power flow constrains, improve computational efficiency using multiple-parametric programming method, and reduce carbon emission in the power system by carbon pricing mechanism.

IMS Center & Industrial AI Center Lab

- Implement the analytical tools to assess the health of the shaft in a rotor-bearing system and predict the Remaining Useful Life of an unspecified engineered system.

State Key Laboratory of Power Transmission Equipment & System Security and New Technology – CQU

Research Assistant of Professor Yu Juan's Team

A Data-Driven Optimal Power Flow Method

- Simulated power flow and power system IEEE standard by Python. Built CNN neural networks for training, used the trained model to perform optimal power flow calculation methods. Finally resulted in a patent for the model and calculate method.

Infrared insulator recognition based on mask-RCNN

- Applied image segmentation and recognition in power engineering of State Grid, proposed pre-processing and algorithm strategies for image processing independently.
- Built the integrated neural network with transformer, achieved the accuracy to about 85%, which was successfully applied to the State Grid industry.

INTERNSHIP

NARI Technology Co., Ltd. (Subcompany of State Grid) Nanjing, China

Configuration Test Engineer Assistant 09/2020-12/2020 & 05/2021-07/2021

- Assisted in deploying and testing the integrated monitoring system on Linux and Windows systems. Maintained daily databases and commissioned industrial control cabinets.

Siemens Power Automation Ltd. Nanjing, China

Research Intern 01/2020-04/2020

- Researched the power industry and analyzed the trend of the power industry. Wrote research reports and literature reviews independently, updated the technical reports of R&D Department.

HONORS AND AWARDS

Graduation with Cum Laude, University of Cincinnati 04/2023

Dean's List, University of Cincinnati Fall 2019& Fall 2021&Fall 2022

Excellent Young Volunteer in Chongqing 06/2022

Merit Scholarship, Chongqing University 07/2020

Outstanding Leader of Student Union, Chongqing University 06/2020

ACTIVITIES

Teaching Assistant in EECE4038C Embedded System Design 01/2023-04/2023

Global Youth Leadership Academy (United Nation Industrial Development Organization), *Engineer* 07/2022

International interdisciplinary Contest in Modeling, *Modeler* 02/2022

ADDITIONAL INFORMATION

Skills: Python, C/C++, MATLAB, CAD, assembly language, Google Cloud, AWS, Github

Languages: English (proficient), Chinese (native)

Hobbies: Economics, Computer games, Photography, Cooking