

ZIXIN LIU

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Education

Shandong University, Qingdao

Master of Computer Technology

Award: Outstanding Graduate Student

Sept. 2019 - June 2022

GPA: 83.1/100

Xi'an University of Posts and Telecommunications, Xi'an

Bachelor of Computer Science and Technology

Award: National Encouragement Scholarship (Rank: 4/197, GPA: 86.1/100)

Sept. 2014 - June 2018

GPA: 83.9/100

Professional Experience

Pengcheng Laboratory

Machine Learning Engineer

July 2022 – Present

Research

Multi-modal Emotion Recognition via Hierarchical Knowledge Distillation

Dec. 2021 – June 2022

Advisor: Prof. [Liqiang Nie](#), Shandong University | Qingdao, China

- Developed a hierarchical **knowledge distillation** model(HKD-MER), which enables the transfer of knowledge from the dominant modality to the others, to narrow the gap between different modalities.
- Enhanced the design of HKD-MER and developed it using PyTorch, including building, training, and fine-tuning.
- Achieved **SOTA** performance with HKD-MER on benchmark datasets.
- **Submitted and under review by IEEE TMM.**

Fashion Graph-enhanced Personalized Complementary Clothing Recommendation

Nov. 2020 – May. 2021

Advisor: Prof. [Xueming Song](#), Shandong University | Qingdao, China

- Developed a fashion graph-enhanced personalized complementary clothing recommendation model(FG-PCCR) that is based on **knowledge graph** and **GNNs**, aiming to integrate high-order relational information and representation learning.
- Replicated all benchmark methods and implemented the GNNs module in FG-PCCR using PyTorch. Additionally, visualized the fashion graph using Neo4J.
- **Published in the Journal of Cyber Security(CCF-B) and supported by CCF-Baidu Open Fund.**

Project

Large-scale Model Distillation Deployment Platform

Jan. 2023 – Present

- A **plug-and-play** model deployment platform based on **pre-trained models**, facilitating a wide range of functions including model subscription, fine-tuning training, model distillation, offline inference, and online deployment.
- Responsible for decoupling the teacher model, student model, and distillation methods, and contributing to the enhancement of platform architecture design.
- Contributed to the development of a **knowledge distillation** decoupling framework that is applicable to various hardware platforms and diverse model architectures.
- **Submitted a patent application and under review.**

Power Substation Wiring Diagram Topological Detection System

Aug. 2019 – June 2020

- The Wiring Diagram Topology Detection System, capable of extracting the connectivity of elements from manually drawn CAD blueprints, enabling automatic conversion from CAD blueprints to CIM/G file formats.
- Responsible for designing and implementing algorithmic solutions.
- Developed a topological relationship detection algorithm based on **object detection** and **contour tracing** algorithms, successfully addressing the project's challenges.
- **Published a research paper in the Journal of Beijing University of Aeronautics and Astronautics and granted a patent(CN202010707515.0).**

Skills

Languages: Python, C++, C, CUDA, Verilog, L^AT_EX

Deep Learning Tools: PyTorch, TensorFlow, PaddlePaddle, MindSpore

Hobbies: Cooking, Jogging