

## EDUCATION

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- **Xiamen University** Xiamen, China  
*Master of Science in Computer Science; GPA: 3.81* *Sep. 2023 – Now*
  - **Relevant Courses:** Machine Learning, Deep Learning, Optimization, Computer Networks
- **Southern University of Science and Technology** Shenzhen, China  
*Bachelor of Engineering in Industrial Design; GPA: 3.55 (85.6/100)* *Sep. 2019 – July. 2023*
  - **Relevant Courses:** Calculus, Linear Algebra, Algorithms and Data Structure, Design Thinking

## PUBLICATIONS

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- **GPT4Battery: Cross-battery State of Health Estimation via Physical-Guided Test-time Prompt Learning with LLM**, Submitted to *ACM Multimedia*, 2024  
Yuyuan Feng, Guosheng Hu, Xiaodong Li, Jingwei Hu, Zhensong Hu and Zhihong Zhang\*  
Download Link: <https://github.com/yuyuan6/yuyuan6.github.io/raw/master/files/gpt4battery.pdf>

## PROJECTS

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- **Battery Life Prediction:** Implement the state-of-the-art ML time series forecasting algorithms (such as patchTST, LLM4TS) for the prediction of the life of Li-ion batteries. Collect, pre-process and establish a personal benchmark dataset using Python and Pandas. Develop a custom *conda* environment and conduct a complete ML pipeline using Pytorch with 95% + prediction accuracy.
- **Time Series Representation Learning:** Implement a self-supervised pretraining framework for general time series analysis (through contrastively aligning the time- and frequency- representations in a latent space). Modify the pre-trained model to adapt to a classification task. Test the performance on more datasets with OOD shifts and get improved results.
- **Graph Representation Learning:** Implement two papers about self-supervised learning on graphs (regarding masked autoencoder and diffusion model respectively). Reproduce results and use NNI for hyperparameter searching.
- **Few-shot Anomaly Detection/Segmentation:** Utilize a pre-trained CLIP model for unsupervised anomaly detection and segmentation. Combine the word and image feature together for classification and use a memory bank to storage there features of reference images. Execute experiments and reproduce the results on more datasets.

## EXPERIENCE

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- **Fengjiang Dynamic** Shen Zhen, China  
*Intern - Computer Vision Engineer* *Jul 2022 - Sep 2022*
  - **3D Object Detection:** Develop an algorithm to detect and locate an object in a given 3D coordinate using a R-GBD camera. Worked on the camera calibration, depth image process and training a yolo model.
  - **Drive a Robot Arm:** Use the set of SDKs and C++ source code to drive an industrial robotic arm under Linux system. Move the gripper to the given coordinates.
- **National University of Singapore** Singapore  
*Summer Workshop* *Jun 2022*
  - **Deep Learning Training:** Learn the theory and basic networks of modern deep learning. Practices of how to train, evaluate and use a DL model in Pytorch and Tensorflow.
  - **Group Project:** Build a system to help smooth human emotions during quarantines as a team. The project involves training a model to recognize emotions of a person through text, audio and image, upload it to the cloud using Flask and make reactions.

## RESEARCH INTERESTS

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My research interest include but not limited to: Time Series, Large Language Models, Multi-modal Learning and Explainable AI.