

ZHENXIANG LIN

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EDUCATION

University of New South Wales

Sydney, Australia

Master of Information Technology

September 2019 - December 2021

Main Courses: Computer Vision (89/100), Neural Networks and Deep Learning (92/100)

Shanghai University of Electric Power

Shanghai, China

Bachelor of Engineering in Electrical Engineering

September 2012 - June 2016

RESEARCH EXPERIENCE

3D Visual Grounding on Large-Scale Pedestrian Scenes

December 2021 - present

Research Intern, ShanghaiTech University

Advisor: Yuexin Ma

- Performed cleaning and statistic of a new 3D Visual Grounding dataset.
- Implemented both one-stage and two-stage 2D visual grounding methods on our dataset to verify the validity of our dataset.
- Implemented current 3D Visual Grounding methods.
- Proposed a motion-aware view-based position embedding method and a two-stage framework for 3D Visual Grounding in the Wild and achieve state-of-the-art.
- Submitted a paper on NeurIPS2022.

Multi-Label Long-Tailed Distribution Image Classification

June 2021 - December 2021

Research Project, University of New South Wales

Advisor: Yang Song

- Conducted a literature review about long-tail distribution and multi-label issue.
- Compared and analyzed effects of different factors on the long-tail distribution problem, including resampling, reweighting, and different backbones (Swin-Transformer and ResNet).
- Integrated the best methods to achieve a higher performance on VOC-MLT and COCO-MLT.
- Summarized advantages and disadvantages including all used methods.

Plants Image Instance Segmentation

October 2020 - December 2020

Computer Vision Project, University of New South Wales

- Conducted a literature review about instance segmentation and plants image process.
- Implemented Unet by PyTorch and applied it on Plant Phenotyping dataset.
- Tuning the parameters to get a best result.

WORK EXPERIENCE

Research Intern, ShanghaiTech University, Yuexin Ma's Group

December 2021 - present

- Conduct experiments, collate and clean the dataset, lead 3D Visual Grounding Project.

ACTIVITIES

Jane Street Market Prediction

Kaggle

- Use TensorFlow2.0 to implement a MLP model to predict stock data in order to maximize profits. (Top 16%)

SKILLS

Language: Python, Java, C/C++

Libraries: Pytorch, TensorFlow2.0, OpenCV, scikit-learn, mmcv, etc.

Framework: mmdetection, mmdetection3d, Django

AWARD

- The third prize of excellent student's scholarship at SUEP. (2012-2013 and 2013-2014 academic years)