ZHENXIANG LIN

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EDUCATION

University of New South Wales Sydney, Australia
Master of Information Technology in Artificial Intelligence with Excellence *Sep. 2019 - Dec. 2021*
Related Courses: *Principles of Programming* (89/100), *Computer Vision* (89/100), *Neural Networks and Deep Learning* (92/100)
Weighted Average Mark: *83.8125/100*

Shanghai University of Electric Power Shanghai, China
Bachelor of Engineering in Electrical Engineering *Sep. 2012 - Jun. 2016*
Related Courses: *Computer Application Foundation* (94/100), *Computer Architecture and Organisation* (87/100), *Analysis and Processing of Signal* (88/100)

RESEARCH PROJECTS

3D Visual Grounding on Large-Scale Pedestrian Scenes *Dec. 2021 - Jun. 2022*
Research Intern, ShanghaiTech University *Advisor: Yuexin Ma*
• Analysed the limitation of current 2D/3D Grounding datasets.
• Performed cleaning and statistic of a new 3D Visual Grounding dataset about pedestrian.
• Implemented both one-stage and two-stage 2D visual grounding methods (ReSC and ViLBert) on the new dataset to verify its validity.
• Implemented current 3D Visual Grounding methods (InstanceRefer, Referit3d and ScanRefer) and compared them.
• Conducted experiments for the new dataset and design some modules for its characteristics.
• 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 *Jun. 2021 - Dec. 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 Process *Oct. 2020 - Dec. 2020*
Computer Vision Project, University of New South Wales
• Conducted a literature review about plants image process and downstream tasks including detection and segmentation.
• Analysed classic deep learning methods (RCNN, FCN, Unet) and traditional computer vision approaches.
• 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 *Dec. 2021 - Jun. 2022*
• Conduct experiments, collate and clean the dataset, lead 3D Visual Grounding Project.

Maintenance Engineer, State Grid Shanghai Municipal Electric Power Company *Sep. 2016 - Mar. 2019*
• Operate and maintain electric devices, manage devices ledger, join substation construction 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)