FANG Yunhao

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EDUCATION

Zhejiang University (ZJU) 09/2018~06/2022

Electronic Engineering and Technology

- GPA: 3.92/4.0 1st/97
- Honors and Awards: China National Scholarship; Mathematical Contest in Modeling: Meritorious Winner; Huang Hong & Wu Xiaobei Scholarship (3 out of 2000); Rockchip Mobile and Innovative Contest 4th place

University of Illinois at Urbana-Champaign (UIUC) 07/12/2020~07/26/2020

Telecommunications & Engineering, Summer Course

- Wireless and Mobile IoT: From Algorithms to Applications (Romit Roy Choudhury) Final Grade: 99.1
- Wireless Communications: 5G / WiFi 6 & Low Power IoT (Haitham Hassanieh) Final Grade: 100

University of California, San Diego 09/2022~now

Computer Science and Engineering

- GPA: 4.0/4.0

RESEARCH EXPERIENCE

Distillation Large Vision-Language Model with Out-of-Distribution Generalizability 09/2022~03/2023

In submission to ICCV2023, Supervised by Prof. Hao Su

- Explore the constraints and behaviors of distilling Vision-Language model(e.g. CLIP) with light models
- Propose approaches to improve distillation by keeping vision feature spaces, relative relationships between vision and language feature space , as well as enrich the language feature space with informative description at the same time.

Deductive Verification of Chain-of-Thought Reasoning 03/2023~05/2023

In submission to NeurIPS2023, Supervised by Prof. Hao Su

- Explore the constraints and behaviors of distilling Vision-Language model(e.g. CLIP) with light models
- Propose approaches to improve distillation by keeping vision feature spaces, relative relationships between vision and language feature space , as well as enrich the language feature space with informative description at the same time.

Image Based Foreign Object Detection of High Speed Railway Catenary Network 05/01/2020~05/26/2021

Member, Supervised by: Prof. Jiming Chen IEEE Fellow

- Take real-time video of high speed train's front-loaded camera as input and search for foreign objects tangled on the catenary network using improved yolov5s mode designed with innovative preprocessing methods, loaded on a Nvidia Jetson Nano embedded system and accelerated the interfering progress by TensorRT
- Proposed a new method named horizon division to divide the input pictures along the horizon and improved the inference speed from 7ps to 37ps

Auto-irrigation System with Mobile Application 03/04/2021~05/07/2021

Leader-Fourth place in ISEE-Rockchip Mobile and Innovative Contest

- Designed a raspberry 4B based auto irrigation system and an auxiliary Android App
- Responsible for the work including the protective circuit and the amplifying circuit constructing by circuit elements to meet different voltage and current requirements
- Designed and wrote code for the App

A Touch Sensing Design with Microstrip Filter 07/10/2019~12/02/2019

First-author submit to Electronics Letters

- Proposed a sensing design based on electromagnetic induced EIT phenomenon and a mathematical measurement
- Describe the change of two EIT bands induced by the U-shape structure when electric objects are approaching, namely the change of the S-parameters, using the shifting vector and grids of the filter plane.
- Accomplished a 3x3mm precisely region locating of touching objects by utilizing the phase spectrum and the magnitude spectrum with correctness of 94.4%.

INTERNSHIPS

Shanghai Artificial Intelligence Laboratory. 11/2021~06/2022

- *Maintain the opensource codebase mmtracking*
- *Doing research work about multiple object tracking*

Hangzhou Humpback Whale Technology Co., Ltd. 01/09/2020~02/12/2020

- *Algorithm Engineer Internship, Proposer of research project A Single RGB-camera Based Push-up Count and Attitude Rectification Method* (patent)
- Proposed the idea of combing conventional method with fashionable neural network to detect whether procedure of push-up is completed
- Responsible for the geometry module, the HMM module, the initial recognition of 2D skeleton points and the connection of different parts