

YANG Cheng

HomePage : yangcheng.site

Github : github.com/xiaochengsky

Email: chengyangno1@gmail.com

Mobile: +86-13476157273

EDUCATION

- **Huazhong University of Science and Technology** Wuhan, China
Master of Engineering - Electronic Information and Communication Engineering September 2018 - June 2021
- **Hunan Agricultural University** Changsha, China
Bachelor of Engineering - Electronics and Communication Engineering September 2014 - June 2018

PAPER

- **A novel Pose-based Copy and Paste method (PCP) for ReID in complex scenarios:** *under review*
- **Hyperspectral Image Classification Based on Gramian Angular Fields Encoding:** *Accepted by CCECE2022*

EXPERIENCES

- **Model optimization** Shenzhen state-owned enterprise Co.,Ltd
Computer Vision Engineer July 2021 - Now
 - **MediaFlow - Traffic Analysis Application:** Based on the python concurrency, detection(YoLov5) and tracking(ByteTrack) model. As one of the main contributors, in the case of inputting a 200w pixel video, I easily demonstrated the whole scheme in real-time on CPU(i7-10870H).
 - **Model compression:** I implemented a 35% reduction in FLOPs and parameters in typical model without negatively impacting mAP, e.g. YoLov5.
 - **Various classification tasks:** Based on my PyCR pipeline and yolov5, I solved many classification(Road slogan, Vegetation destruction, vehicle) and detection(traffic, fire, fumes, dust) tasks quickly and efficiently.
- **Optimize classification models** Beijing YITU Co.,Ltd
Computer Vision Intern Nov 2020 - May 2021
 - **Optimize models:** Optimize several classification models, for example, cyclist and pedestrian model, ReID model, etc.
 - **Find a data augmentation strategy:** Copy and Paste method based on Pose for Re-identification.
- **The Commodity Automatic Checkout Counter** Beijing Baidu Co.,Ltd
Computer Vision Intern April 2020 - July 2021
 - **Optimize detection model:** Under the condition of ensuring the detection accuracy(98%), the yolov3 is used to replace the CascadeRCNN, and then saved calculation cost(fps from 15 to 90 in V100).
 - **Refactoring the image retrieval framework:** Optimize the loss constraint from CE loss to CE + Triplet loss, and improve the retrieval accuracy(from 98% to 99%).
- **Cross-platform Tencent Cloud image and speech processing interface tool** Shenzhen Tencent Co.,Ltd
Software Development(backend) Intern June 2019 - October 2019
 - **Develop the cross-platform tool:** In order to better provide users with related image and speech processing services, I developed this set of interface processes based on Golang, which can be used on multiple operating systems such as windows, linux, and mac.
- **Aegis-The Blue Army Attack Platform** Shenzhen Tencent Co.,Ltd
Software Development(backend) Intern June 2019 - October 2019
 - **Develop the management system:** In order to better implement the reliability of DDos attacks, I completed this system well, it includes web, server etc.
- **The LIFX Bulb** Shenzhen Doit Co.,Ltd
Embedded Development Intern June 2018 - October 2018
 - **Develop the LIFX Blub products:** To completed this product, I completed entire hardware program control system by the ESP8266 and lifx protocol. For example, web's portal configuration, driving multiple bulbs, OTA, etc.

PROJECTS

- **PyCR (Pytorch for Classification and Retrieval):** I created the pipeline called PyCR, which can complete the end-to-end processing of image classification and retrieval task.
- **Design and Implementation of a low-complexity wearable system for football sports monitoring:** Its goal is to create a low-complexity, low cost and high-efficiency(QPS) product which serves group sports monitoring. It's mainly to monitor some physical information of athletes, such as speed, heart rate, real-time position, number of jumps and height, etc.

COMPETITIONS

- **Huawei Global Campus AI Competition 2020 (Top16)**: This is an image retrieval task about electronic products, and we need to find 10 electronic products that are most similar to each query dataset from gallery dataset.
- **Kaggle The Wheat detection (Top 2%)**: This is an object detection task about Wheat Detection, and we need to mark all the wheat heads in echo images.

HONORS AND AWARDS

- The First Prize Scholarship, Huazhong University of Science and Technology - Nov. 2018/2019
- The National Scholarship, Hunan Agricultural University - Nov. 2017
- The National Third Prize, the MCU Development of the Blue Bridge Cup - May. 2016
- The First Prize Scholarship, Hunan Agricultural University - Nov. 2016/2015
- The Head of the Student Union Work-Study Department and Outstanding Student Leader - Dec. 2015