JIEKE WANG

https://jackywang2001.github.io

9450 Gilman Drive, La Jolla, CA 92092

(+86)19905261399 ⋄ jiw010@ucsd.edu

EDUCATION

University of California San Diego *Fall 2019 - Present*
Bachelor of Mathematics
Department of Mathematics

SKILLS / PROGRAMMING LANGUAGES

Familiar with algorithms in classification, detection & segmentation, SLAM.

Solid mathematics and statistics background.

Fluent in Java, Python (PyTorch), Mathematica.

INTERNSHIP

July 2020 - August 2020: Internship as Strategy Programmer in Shengang Securities, Shanghai

RESEARCH EXPERIENCE

July 2018: high school summer program in MIT CSAIL
    Project: aiming to design an **intelligent garbage bin that classifies empty garbage bins**
    Challenges: garbage bottles may be distorted or broken; we want to distinguish empty bottles from bottles with liquid.
    Process: we collect data using web crawler. Then we use SURF to extract features and BOVW model to save features for feature matching. The final robot was able to recognize 70% physical bottles.

PROJECT

- December 2020: **Semantic Segmentation for Anime-Style Art**
  Background: current models show great performance on real-world images. We want to do a transfer learning to make the model work for anime-style art so it is able to .
  Process: We applied a CartoonGAN to ADE20k dataset to create 4 anime-style images. Then use a pretrained DeepLabV3 to do transfer learning for the dataset.

- August 2020: **Person Re-Identification (ReID)**
  Background: images are taken from different angles and different occasions
  Process: We used transfer learning with a pretrained CNN (MobileNet-V2) on Market1501 dataset, initially getting accuracy of 50%. After blending label smoothing, the accuracy increases to 55%. Finally, introducing semi-hard triplet loss improves the accuracy to 75%.

PAPER RE-IMPLEMENTATIONS

- Classification: ResNet, MobileNetV2, SIFT+BoVW

- Detection: Faster RCNN, YOLOv3, CenterNet

- Segmentation: DeepLabV3, Mask RCNN

- Multi-modal: image captioning, VQA