

Research
At
UESTC
(2015~2018)

Ship Identification: Ship Detection of Images by SSD with Dehazing

1. Data: dehazing, data augmentation (patch sampling + horizontally flip + photo-metric distortion, image clustering), dataset splitting, hard negative mining + clustered-images for positive augmentation
2. Model: SSD, change aspect ratios of default boxes at layers which near output more similar to ships' aspect ratios
3. Innovation: image clustering for positive augmentation, three stages – train + fine-tune on small ships set + fine-tune on large ships set
4. To improve: more effective augmentation/sampling

Time-Sequential Wind Dancing Signal Anomaly Detection

1. Feature: sequential tokens -> time-domain feature and *Batch Normalization with Sliding-Window Preprocessing (BNSWP)*, frequency-domain feature -> 2D fusion sequential feature
2. Model: CNN classifier and RNN predictor, CNN-RNN combination in inference
3. Innovation: BNSWP, 2D sequence, “combine” of classify (CNN) and predict (RNN)
4. To improve: noise & sampling, posterior & prior probability, ensemble learning, clustering

Master's
Thesis

Computer Vision
Field

Recommendation,
Deep Learning

Experience

Search and Ads,
NLP and Graph

Coupon Recommendation
(CVR estimation, *Ant*)

Ads Ranking
(CTR, Search, Ads, *Baidu*)

Ads Recalling
(Language Model, Graph,
Search, Ads, *Baidu*)

Industry
Working
(2018~2022)

(More details
can be found
in my resume)

Machine Learning
and
Deep Learning

Mini End2end “Robot” System

Freescall Car (Mini “Robot” Maybe)

1. An end2end mini “robot” system
2. Autonomous path recognition smart car
3. Embedded programming and PID control algorithm

Undergraduate Project and Competition
At *Hohai University*
(2011~2015)