Chaoyu Li

+1(917)-327-7930 • chaoyuli@usc.edu • github.com/AsunaSS

EDUCATION

University of Southern California   **Los Angeles, CA**
    Master of Science in Applied Data Science   *Aug. 2021 – Expected May 2023*
    Current GPA: 4.0/4.0

Chongqing University of Posts and Telecommunications   **Chongqing, China**
    Bachelor of Science in Internet of Things   *Aug. 2016 – May 2020*
    Cumulative GPA: 3.5/4.0 (Rank 3/141)

RESEARCH INTERESTS

○ Object and Action Recognition: Object detection in complex environments; Action recognition in distorted or adversarial samples.

○ Adversarial Robustness: Real-world robust learning systems; Robustness to image distortions and adversarial examples.

○ Learning from limited supervision: Complete unsupervised or semi-supervised adversarial training with little data.

PUBLICATIONS (*Equal Contribution)

[1] Fengshun Zhou*, Chenqiang Gao*, Fang Chen, Chaoyu Li, Xindou Li, Feng Yang, Yue Zhao. *Face Anti-Spoofing Based on Multi-layer Domain Adaptation*. 2019 IEEE International Conference on Multimedia & Expo Workshops (**ICMEW**), 2019, pp. 192-197, doi: 10.1109/ICMEW.2019.00-88.

[2] Yongqing Sun, Xu Chen, Chaoyu Li et al. *NTT_CQUPT@TRECVID2019 ActEV: Activities in Extended Video*. TRECVID 2019.

[3] Xu Chen*, Chenqiang Gao*, Chaoyu Li, Yi Yang, Deyu Meng. *Infrared Action Detection in the Dark via Cross-Stream Attention Mechanism*. IEEE Transactions on Multimedia(**TMM**), vol. 24, pp. 288-300, 2022, doi: 10.1109/TMM.2021.3050069.

RESEARCH & PROJECT EXPERIENCE

IRIS Computer Vision Lab | University of Southern California   **Los Angeles, CA**
Research Assistant. Advisor: Prof. Ram Nevatia   *May 2022 – Present*
○ Formulated the patch defense problem as a segmentation task and used a task-agnostic defense, achieved state-of-the-art robust accuracy under multiple tasks(detection, tracking, classification) and attacks(nonadaptive attack, adaptive attack) with just a slight degradation in the benign performance.

TRECVID 2019 ActEV, held by NIST | Computer Vision Lab of CQUPT   **Chongqing, China**
Research Assistant. Advisor: Chenqiang Gao   *Dec. 2018 – May 2021*
○ Completed a pipeline based on object recognition, time series tracking, and action classifier to recognize action categories of people and vehicles in traffic surveillance videos on VIRAT dataset, achieved **5th place of 19 teams**. Paper(Team name: NTT_CQUPT)

○ Designed a cross-stream network to use optical flow information to narrow the performance gap between infrared and visible videos, achieved the best performance compared with other infrared action recognition methods on Infrared-Visible datasets.

Social Security Big Data Genetic Infrastructure Service Technology Research   **Shanghai, China**
Research Assistant. Advisor: Prof. Rui Feng   *July 2018 – Aug. 2018*
○ Built an OCR model with modified CTPN+CRNN fine-tuned on Synthetic Chinese String dataset to recognize the information on the People's Republic of China ID Card, achieved the recognition rate of **60%**.

WORK EXPERIENCE

Microsoft Asia-Pacific Research and Development Group **Beijing, China**
Part Time Assistant *July 2019 – Aug. 2019*

○ Optimized a **search engine** about Tech News, which fetches and categorizes news daily from 20+ technology websites and blogs(e.g., TechCrunch.com, Wired.com), then auto-push them to interested customers.

○ Built a recognition model with **MTCNN+RESNET18** and **DREAM module** to recognize the celebrities in news images, achieved the recognition rate of 69

○ Collaborated with UI designer to establish a portal in **HTML**, connected a **MongoDB** database and the portal in **JavaScript**.

HONOR & AWARD

○ Silver Award for the 2016 ACM-ICPC Asia EC-FINAL Contest

○ Silver Award for the 2017 ACM-ICPC Asia, Shenyang Division

○ Bronze Award for the 2017 ACM-ICPC Asia, Qingdao Division

○ Silver Award for the 2018 China Collegiate Programming Contest, Qinhuangdao Division

○ Bronze Award for the 2018 ACM-ICPC Asia, Nanjing Division

○ Silver Award for the 2018 ACM-ICPC Asia, Qingdao Division

○ Bronze Award for the 2018 China Collegiate Programming Contest Final

○ 2016 SK Enterprise Talent Scholarship

○ National Scholarship 2017-2018 Academic Year

○ The First Prize Scholarship of Chongqing University of Posts and Telecommunications

○ Outstanding Graduates of Chongqing University of Posts and Telecommunications in 2020