Xinyu Wang

https://shawn233.github.io/about

EDUCATION

Shanghai Jiao Tong University

Shanghai, China

Undergraduate, School of Computer Science

Sept. 2016 - Present

Email: wangxinyu500103@gmail.com

- o Zhiyuan Honors Program of Engineering: an elite program for top 5% students
- IEEE Pilot Class: an elite class for top students, referring to MIT's educational model
- o GPA: 90.99/100 (3.95/4.30), Ranking: 2/95

Publications

No-Jump-into-Latency in China's Internet! A Hop Count Based IP Geo-localization Approach

- Chong Xiang, Xinyu Wang, Qingrong Chen, Minhui Xue, Zhaoyu Gao, Haojin Zhu, Cailian Chen, and Qiuhua Fan
- In Submission to 26th IWQoS

RESEARCH PROJECTS

Hop Count Based IP Geo-localization in China's Internet

Jun. 2018 - Oct. 2018

Advisor: Prof. Haojin Zhu

Shanghai Jiao Tong University

- Exploited hop count instead of RTT for distance estimation to address the problem of poor correlation between latency and physical distance in China's Internet
- Estimated service radius for each provincial router and fitted a mapping from hop count to physical distance between IPs within the same province
- Geo-localized the target IP to the location of its nearest landmark and achieved an estimation error within ten kilometers for 65% of 48,874 targets

Robust Features as a Defense Against Image Adversarial Attacks

Oct. 2018 - Jan.2019

Advisor: Prof. Li Jiang

Shanghai Jiao Tong University

- Introduced the concept of "robust features", features of input images that are resistant to slight perturbations. and exploited the edge information and the color construction as robust features
- \circ Proposed a robust deep learning structure to evaluate edge information, one of the robsut features, and successfully defended against 71.5% (99.5% for the best class) adversarial attacks
- Analyzed the internal reasons of robustness by mathematically evaluating the edge detection algorithm, and summarized four major factors which will shed light on future exploration of defenses against adversarial examples

Deep-Learning-Based High-Frequency Stock Price Prediction

Nov. 2018 - Dec. 2018

Advisor: Prof. Liqing Zhang

Shanghai Jiao Tong University

- \circ Analyzed the statistical features of high-frequency stock trading among over 100,000 records
- $\circ\,$ Processed raw trading records using data cleaning, normalization, and data smoothing techniques
- Applied two deep learning algorithms on processed data to model the sophisticated trading game, and achieved an error rate of less than 0.00140 on Kaggle private leaderboard (ranking 4/60)

Honors and Awards

- Jin Long Yu Scholarship, Shanghai Jiao Tong University (only 3 awarded studetns in the School of EECS)
- Zhiyuan Honors Scholarship, Shanghai Jiao Tong University (top 5%)
- Zhiyuan Honors Research Program, Shanghai Jiao Tong University
 - o Project Topic: Adversarial Deep Learning and Its Applications in Internet of Things
 - The only EECS project out of 8 projects founded in 2018

Programming Skills

- Knowledge of Python, C++, and Java
- Capable of implementing machine learning models with Tensorflow
- Experience of website designing using JavaScript

EXTRACURRICULAR ACTIVITIES

- Volunteering Experiences
 - ACM TURC 2018 volunteer, served as conference recorder
 - o Shanghai International Marathon volunteer, in both 2018 and 2019