Li, Tianle
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Education

The Hong Kong University of Science and Technology   09/2017-06/2021(Expected)

B.S. in Data Science and Technology; Minor in Big Data Technology

GPA: 3.65/4.3 (10%)   Major GPA: 4.0/4.3 (2%)   Awards: Dean's List

Research Projects

Detect Fake News in Social Network   08/2020-Present

Final Year Project Supervised by Prof. Raymond, Wong   HKUST, Hong Kong

- Devised a modified heterogeneous graph neural network fusing context-based method and social-content based method
- Utilized knowledge graph to provide supplementary information for fake news detection

Generate Adversarial Examples in Text with Budget Constraint   05/2020-Present

Research Assistant supervised by Prof. Yang, Yi funded by GRF   HKUST, Hong Kong

- Proposed novel adversarial examples generation algorithm against CNN, LSTM and BERT models with synonym substitution on sentiment classification task
- Reduced more than 80% queries required to successfully generate an adversarial example by a devised variation of genetic algorithm, learning global information with logistic regression and employing local information with dynamic direction vectors. This work is submitted to the conference and is under review.

Low-rank and Sparsity Reconstruction in Data Science Application   02/2019-08/2019

Student Researcher supervised by Prof. Cai, Jianfeng   HKUST, Hong Kong

- Exploited accelerated alternating projections for robust PCA and low-rank Hankel matrix completion to efficiently decompose a Hankel matrix into a low-rank Hankel matrix and a noisy sparse matrix with MATLAB
- Experimented with real data from stock market, which leads to 2% improvement on price prediction accuracy

Experience

Google Machine Learning Winter Camp   01/2021

Participant   Google, Shanghai

- Implemented person portrait matting algorithm based on UNet-structure network
- Built style transfer system on matting person portrait images with utilization of ResNet and CycleGAN to transfer images from realistic style to Simpson's Cartoon style on GCP

Crypto Exchange   06/2019-08/2019

Research Intern in Artificial Intelligence and Big Data Analytics Department   ASTRI, Hong Kong

- Scraped and denoised the transaction data of cryptocurrency from online trading platform
- Applied LSTM on cryptocurrency exchange trading strategy according to business indexes like exponential moving average and relative strength index

1st prize – Code for Good Challenge hackathon – J.P. Morgan   10/2019

- Led a team to build a management system for Premiere Performances
- Implemented search function, nodes graph visualization, engagement and likeness of clients in the database
- Won the bid from Premiere Performances with recognition of managers from J.P. Morgan

CSL Data Analytics Case Competition   09/2019-12/2019

- Scraped reviews from HK.trip.com and classified positive and negative keywords for distinct targeted customers through sentiment analysis and word clouds
- Exploited deep wide learning model and analysis results to recommend desired hotels for online customers

Awards

- Dean's List (twice)
- University Scholarship Scheme for Continuing Undergraduate Students
- Social Career Volunteer Awards: Community Heroes Awards

Skills

- Python (Pytorch, Tensorflow), C++, JAVA, SQL, MATLAB, Blockchain, etc.