

## Li, Tianle

Tel: (+852) 95653901 | Email: tliax@connect.ust.hk

### 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 vector. This work is submitted to the conference and is under review.

#### Low-rank and Sparsity Reconstruction in Data Science Application

03/2019-08/2019

*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 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 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.