

# Yao Zhongyu, Frank

Tel: +852 59987778 / +86 18883944246

Email: [frankyao7@outlook.com](mailto:frankyao7@outlook.com) / Website: [www.zhongyu.site](http://www.zhongyu.site)

## Profile

- Strong passion in machine learning/data mining-related R&D with empirical experience
- Hands-on experience in C/C++, Java, Python programming and other system implementation
- Sound knowledge about data science, database, machine learning and so on
- Various international experiences and great command of written and spoken English with certifications
- Able to work under pressure with high independence. Open-minded, creative and eager for learning

## Education

- |  |   |                       |
|--|---|-----------------------|
| <b>2018.09-2020.03</b>   | <b>The Hong Kong Polytechnic University</b>                 | <b>Hong Kong SAR</b>  |
| ➤ Master of Science in Information Technology                            |   |                       |
| ➤ Graduated with Credit  |   |                       |
| <b>2016.07-2016.09</b>   | <b>University of California, Irvine</b>                     | <b>United States</b>  |
| ➤ Visiting International Program   |   |                       |
| <b>2014.09-2018.06</b>   | <b>Chongqing University of Posts and Telecommunications</b> | <b>Mainland China</b> |
| ➤ Bachelor of Engineering in Information Security                        |   |                       |
| ➤ Elite Class of Outstanding Engineers Program ( <a href="#">PETOE</a> ) |   |                       |
| ➤ Comprehensive ranking: 7/282   |   |                       |

## R&D Experience

### Research Papers

- Recursive Balanced k-Subset Sum Partition for Rule-constrained Resource Allocation. CIKM 2020
- IRDA: Incremental Reinforcement Learning for Dynamic Resource Allocation. IEEE Trans. Big Data, 2020 [DOI](#)
- BigARM: A Big-data-driven Airport Resource Management Engine and Application Tools. DASFAA 2020
- A Sequential Attention Based Convolutional Neural Network for Anomaly Detection. Journal of Zhengzhou University (Natural Science Edition), 2019(02) [DOI](#)

### Competitions&Developments

- |  |  |
|--|--|
| <b>2018.10-2019.06</b>   | EY Data Science Competition, “ <i>Smart City</i> ”, Ranked <b>top 10 in HK, 6.2%</b> (147/2369) <b>globally</b>                |
| ➤ Predict the vehicle location in the city of Atlanta by using systematic data mining and processing ideas.  |  |
| <b>2018.10-2018.12</b>   | Kaggle Competition, “ <i>House Price Prediction</i> ”, Ranked top <b>13.27%</b> (603/4541) <b>globally</b>                     |
| ➤ Predict the house price of a state in USA by using advanced regression analysis. In data preprocessing section, correlation analysis, outliers, missing values and new feature construction are considered. In modelling part, multiple algorithms including XGboost, Ridge Regression and Gradient Boosting Regression, are considered and combined.  |  |
| <b>2017.09-2018.06</b>   | Tianchi Competition, “ <i>Clothes Matching on Taobao</i> ”, Ranked top <b>0.67%</b> (17/2523) <b>globally</b>                  |
| ➤ Analyze and model more than 1.837 million Taobao desensitization data by Java and Python. Thoughtful feature engineering is deployed, constructing multiple rules and comparing the results of decision trees C4.5, Bayesian, KNN and TF-IDF. Finally, results are gotten by merging models.   |  |
| <b>2017.03-2017.06</b>   | <b><u>Team Leader</u></b> , National College Student “ <i>Challenge Cup</i> ” Contest, Ranked top <b>0.46%</b> <b>globally</b> |
| ➤ The system is designed to target abnormal real-time or predicted flow distribution, giving rational advice to the airport and presenting users the flow inside the airport in different time. As the captain, I controlled the work progress, coordinated team members, and held monthly meetings with professors to provide optimization suggestions. |  |
| <b>2015.03-2016.08</b>   | <b><u>Leader</u></b> , The 6th “ <i>Huawei Cup</i> ” Chinese University Students Intelligence Design Competition               |
| ➤ Read massive papers, selected algorithm, design models, and reconciled schedule among instructor and members   |  |
| ➤ Presented to judges and the final result was 2 <sup>nd</sup> Prize of National-level   |  |

## Extracurricular Experience

### 2019.02-2019.03 Volunteer, Innovating Hong Kong Global Talent Carnival

- Invited international companies, top Chinese and local Hong Kong innovative companies to join the fair and guide

### 2016.09-2017.07 Teacher Assistant, College of Computer Science and Technology

- Administrated daily class work. Planned and organized activities between college and classes, such as promotion of exchange students program, friendship activities between classes (over 100 people), sports activities, etc.
- Tutored students English. Students examination scores improved a lot and most of them passed the CET4 after coach.

### 2015.03-2016.03 Volunteer, English Corner in the University

- Organized oral communication between foreign teachers, Chinese and international students every week for 1 year

## Work Experience

### 2019.05-Present Research Assistant, The Hong Kong Polytechnic University

- Develop and deploy a big data-driven system with state-of-art ML algorithms, i.e., reinforcement learning
- Design prototypes for performance evaluation of components and for big data programming models
- Conduct research works, including reviewing the literature, abstracting projects and writing papers

### 2017.07-2017.09 Consulting Intern, Deloitte

- Familiar with the business and operation of EWM module in SAP system within one month
- Polish design logic of the new system
- Teaching corporate customers to operate in implementation phase of the system
- Received approval from the whole team and got a recommend letter from the project manager of Deloitte

### 2018.07-2018.09 Director Assistant Intern, Hangzhou Taihao Science&Technology Co.Ltd.

- Negotiated with local government departments and overseas companies to promote business processes on a team basis
- Received foreign government commercial counsellors and assisted in hosting the first Hangzhou International Day
- Understood and participated in the company's operations, like administration, marketing and finance affairs

## Skills

- Programing: Python (PyTorch, Keras, Scikit-learn), C/C++, Java, Html 5, SQL
- Machine Learning: Data Modelling, Basic&Advanced Data Structure and Algorithm, Probability and Statistics Theory
- Language: English (IELTS, CET4/6), Mandarin (PSC secondary-level A), Cantonese (Beginner)

## Awards&Certification

2019.05 (Global-level, 6.2%) Globe Award of EY NextWave Data Science Competition

2018.05 (National-level) Putonghua Proficiency Test(Secondary-Level A)

2017.12 (National-level, 0.06%) Gold Prize of "Internet Plus Express" Innovation and Entrepreneurship Contest

2017.11 (Provincial-level, 0.42%) Outstanding Prize of 3rd "Internet Plus" Innovation and Entrepreneurship Contest

2017.07 (National-level, 7%) 3<sup>rd</sup> Prize of National University Student Information Security Competition

2017.07 (Provincial-level, 10%) 2<sup>nd</sup> Prize of The 15th National College Students' Challenge Cup

2016.12 (University-level, 7%) Outstanding Student Cadre

2016.12 (University-level, 2%) Advanced Individual of Innovation and Entrepreneurship

2016.08 (National-level, 15%) 2<sup>nd</sup> Prize of The 6<sup>th</sup> "Huawei Cup" University Students Intelligence Design Competition

2016.05 (National-level, 3%) 3<sup>rd</sup> Prize of National English Competition for College Students-Class C

2015.12 (University-level, 6%) 2<sup>nd</sup> Class Scholarship

2015.06 (Provincial-level) National Higher College Computer Rank Test Certificate Level-2

## Interests

- Swimming, Fitness, Skateboard, Martial Arts, Tai Chi, Zen, Harmonica