Dingyi ZHUANG

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EDUCATION

Shanghai Jiao Tong University ***Shanghai, China***
Bachelor of Mechanical Engineering *Expected 6/2019*

- **Hsue-shen Tsien Class:** Honor Program in Shanghai Jiao Tong University (top **5%**).
- **Cumulative Academic Average: 85.67**/100.
- **Ranking: 3**/8
- **Advisors:** Prof. Jiangang Jin and Prof. Lee Der-Horng (National University of Singapore)

PUBLICATION

- **D.Y. Zhuang**, J.G. Jin, Y.F Shen, W. Jiang, An empirical study on cycle lane network using bike sharing data: the case of Shanghai, *2018 International Conference on Transportation and Space-time Economics.* **(Presentation)**
- **D.Y. Zhuang**, J.G. Jin, Y.F Shen, W. Jiang, Understanding the bike sharing travel demand and cycle lane network: the case of Shanghai, *Journal of Transport Geography*. **(Under review)**
- **D.Y. Zhuang**, S. Hao, D.H. Lee, J.G Jin, Understanding semantic similarity among subway stations using smart card data. **(Working paper)**

RESEARCH EXPERIENCE

Understanding Semantic Similarity Among Subway Stations Using Smart Card Data ***Singapore***
Research Student of National University of Singapore *7/2018-9/2018*

- Designed a station2vec approach, inspired by word2vec model in natural language processing, then proposed to interpret station vectors as compound words to comprehend their mobility and service semantics.
- Using smart card data collected by Singapore government, applied stacked autoencoder and POI topic modeling to discover the mobility and service semantics respectively to obtain deeper similarity between subway stations.
- Independently finished all modeling and coding work and proposed several urban planning and commercial insight suggestions based on similarity analysis. A working paper is under construction.

Empirical Study on Cycle Lane Network of Shanghai Using Bike Sharing Data ***Shanghai, China***
Project Leader of 2017 Shanghai Jiao Tong University Chuntsung Program *3/2017-6/2018*

- Designed procedures to scraped data automatically from bike-sharing application and applied graphic clustering to mine the insight of four different bike-sharing mobility patterns.
- Suggested a method to explore cycle lane network based on bike-sharing mobility configurations and proposed policy recommendations accordingly. Ideas were contributed to journals.

Robotic Censor Data Capturing and Analysis ***Shanghai, China***
Research Assistant in Robotics Institute of Shanghai Jiao Tong University *9/2015-8/2016*

- Assisted in designing and fabricating sensor circuit board to capture the gait data of patients.
- Processed the sensor data with MATLAB to detect the gait patterns of patients.

Meteorological Data Mining and Solar Radiation Prediction ***Shanghai, China***
Research Assistant in Institute of Refrigeration and Cryogenic Engineering *10/2017-11/2017*

- Tried to apply machine learning method to predict solar radiation in campus using collected meteorological data.

SELECTED PROJECTS

First Prize, Chinese University Students Big Data Innovation Application and Modeling Contest (1/130) ***6/2017***
National Level *Shanghai Internet Big Data Engineering Technology Research Center*

- Key member of my contest team, familiar with distributed architecture, the use of Hadoop, Spark and other large data processing software for data management and operation.
- Extracted 8 million users' features from more than 150TB data and scraped points of interest in Shanghai. Successfully realized precise portrayal (social behavior and internet habit) of the users' portrait.

Honorable Mention, 2017 Mathematical Contest in Modeling (Top 30%) ***4/2017***

International Level *COMAP (Consortium for Mathematics and Its Application)*

- Led a team of three to conduct analysis, modelling and planning on traffic lane network for autonomous vehicles.
- Responsible for modeling, writing and typography with Latex and data visualization with Visio, Python and R.

Health Cloud Services of Heart-Watchdog, Participant Research Program ***4/2016-4/2017***

Campus level *Shanghai Jiao Tong University*

- Built commercial website of healthcare equipment Heart-Watchdog with HTML5 and CSS.
- Commercial website had been officially launched on May 1st,2017. (http://heart-watchdog.com/)

SELECTED HONOR&AWARDS

Chungtsung Scholarship (10%), The Hui-Chun Chin And Tsung Dao Lee Endowment Program Commission . *2017*

First Prize, Chinese University Students Big Data Innovation Application and Modeling Contest . *2017*

Eleme Scholarship (5%, Twice), Shanghai Jiao Tong University. *2016 & 2017*

Excellent Student (5%), Shanghai Jiao Tong University. *2016*

SKILLS

- Programming: Python, R, C/C++, HTML
- Tools: MATLAB, Visio, Latex, MySQL, Hadoop, Origin
- Languages: CET4: 584/710; CET6: 528/710; TOEFL: 99/120 (Speaking:22); GRE:321+3(AW)

MISCELLANEOUS

Vice President, Center of Quality Development *5/2016-9/2017*

Volunteer, UAES-SJTU Collaboration Agreement Signing Ceremony *8/2017*

Outstanding volunteer, 122th Anniversary of Shanghai Jiao Tong University *4/2018*

Hobbies: Reading (History, Technology, Psychology), Sports (Basketball, Running)