Miss Lu FAN

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RESEARCH INTERESTS

Graph Mining, Recommender Systems, Spatio-temporal Data Analysis

EXPERIENCE

CCCN, EE, CityU **SAR, Hongkong** **Oct. 2017-Apr. 2018**
Research Assistant

- Researching and analyzing an opinion dynamic model so-called Naming Game on adaptive networks.

IVSN Group, ZJUT **Hangzhou, Zhejiang** **Sep. 2016-Aug. 2017**
Undergraduate Research

- **Involved in 4 research projects including**
  1. Improved spectral clustering based on Node2vec features and personalized recommendation [1,3].
  2. Local recommendation framework based on geographical and categorical information (Thesis).
  3. Link prediction using supervised learning [2].
  4. Rating prediction based on MLR and semantic analysis [4].
- **In the process I**
  - Cleaned data, did exploratory data analysis and generated reports.
  - Extracted up to 23 common topology features for the project 3, defined an R structure which works well on both directed or undirected weighted network, and is easy to extend.
  - Implemented machine learning solutions and recommendation techniques.
  - Designed the local recommendation architecture present in the thesis. Instigated the direction and completed most of the experimental research in the project 1. Wrapped a single wrapper function to easily subsetting the correlation matrix and extend recommender.
  - Visualization. Made most of the map and figures in all 4 projects.
  - Writing work in the project 1, 2 and 4.
  - Published a browser demo for my own thesis: https://floatsd.shinyapps.io/GeoCUI/

DJI Technology Co., Ltd **Shenzhen, Guangdong** **Jul. 2016-Aug. 2016**
Intern

- Developed and optimized the object detection, tracking and positioning algorithm, make it practical on the DJI Matrice 100 drone and won the bronze prize in the championship.

PUBLICATIONS

*[1] Jinyin Chen, Yangyang Wu, **Lu Fan**, Xiang Lin, Haibin Zheng, Shanqing Yu, Qi Xuan. Improved Spectral Clustering Collaborative Filtering with Node2Vec Technology. 2017* — IWCSN2017

*[2] Chenbo Fu, Minghao Zhao, **Lu Fan**, Xinyi Chen, Jinyin Chen, Zhefu Wu, Yongxiang Xia, Qi Xuan. Link Weight Prediction Using Supervised Learning Methods and Its Application to Yelp Layered Network. 2018* — IEEE TKDE

*[3] Jinyin Chen, Yangyang Wu, **Lu Fan**, Qi Xuan. N2VSCDNNR: A Clustering Recommender System Based on Node2vec and Rich Information Network* — In Progress

*[4] Yewei Yu, **Lu Fan**, Zhongyuan Ruan, Qi Xuan. Prediction of Restaurant Score Based on Multiple Linear Regression* — In Progress

EDUCATION

Information Engineering Department, Zhejiang University of Technology **Sep. 2013- Jun. 2017**

Bachelor of Engineering

Grade	GPA: 84.2/100 (91.6/100 in the last two school years)	Overall Rank: 17/119
Honors	Department Outstanding Thesis 2017	Jun. 2017
	ZJUT Third-class Scholarship	2013/14, 2015/16

SKILLS

- Advanced in R
- Experienced in Matlab, C/C++, mySQL, Spark, OpenCV, Cuda and Linux
- Productivity Tools Seeker
- Experienced in Data Analysis, Graph Mining, Implementing Machine Learning Solutions and Recommenders, Parallelized Computing and Visualization

APPENDIX

Individual Project	▪ Extracted the MFCC and other three common audio features over 700+ bird song records. Developed an SVM classifier over 6 kinds of birds.	Mar. 2016 -Jun. 2016
	▪ Detected and tracked cars in video, count cars in flow and exam the speed of the vehicles, developed using Matlab and mean-shift algorithms.	Feb. 2016
Eglish	▪ Cet-6: 517, Toefl: 83, Speak fluent English.	
Control Theroy & Embedded System	▪ Developed an oven temperature controller based on Cortex M4.	Jun. 2016
	▪ Developed a matlab user interface to visualize the performance of linear control model.	May. 2016
	▪ Developed a game application based on development board TM4C1294.	Sep. 2015
	▪ Tested five controller based on Matlab Simulink. Emulation based on GML2001 maglev levitation ball systems and wrote part of documents.	May. 2014 -Sep. 2015
Habit	▪ ZJUT Arial Radio Control Model Team Member, build and control owned drones and fixed wings, won the third-class prize in RC model control events, China Aeromodelling Design Challenge in Oct. 2015.	Mar. 2013 -Current
Volunteer & Organizatioal capability	▪ Planned and Started the volunteer project of helping retired old to use modern high tech devices. Up to now it has become a long term project and services hundreds of times.	Jul. 2014
	▪ Planned and arranged two ZJUT eyas cup speech contest, one ZJUT Zongheng cup debate competition and multiple Volunteer activities.	Oct. 2013 -Jan. 2015