Lu Fan

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INTERESTS

Data Mining, Recommender Systems, Spatial-Temporal Data, Graph Mining, Computer Vision

SKILLS

- Advanced in R
- Experienced in Matlab, C/C++, OpenCV, mySQL and Linux
- Exploring Spark, python and Tensorflow
- Experienced in Data Preprocessing, Exploratory Data Analysis, Implementing Machine Learning Solutions and Recommenders, Visualization
- Productive Tools Seeker

EXPERIENCE

ZJUT Information Processing and Automative Tech Laboratory **Sep. 2016-Current**

Undergraduate Research

- **Involved in 4 research projects including**
  1. Improved spectral clustering based on Node2vec features and personalized recommendation.
  2. Thesis:Local recommendation framework based on geographical and categorical information.
  3. Link prediction using supervised learning.
  4. Rating prediction based on MLR and semantic analysis.
- **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.
  - Browsed literature in the immediate area to find out the solutions.
  - Designed the local recommendation architecture present in the thesis. Instigated the direction and completed most of the experimental research in the project 1.
  - Visualization. Made most of the map and figures in all 4 projects.
  - Writing work in the project 1, 2 and 4.
  - Developed a demo for the thesis GeoCUI, https://floatsd.shinyapps.io/GeoCUI/

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

Intern & Team Member

- Proposed the final used game plan for the team at the first.
- 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.

EDUCATION

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

Bachelor of Engineering

Grade	GPA: 3.27/4	
Honors	Department Outstanding Thesis 2017	Jun. 2017
	ZJUT Third-class Scholarship	2013/14, 2015/16

PUBLICATIONS

Jinyin Chen, Yangyang Wu, ***Lu Fan****, Shanqing Yu. Personalized Recommendation Method with Spectral Clustering Based on Dynamic Nearest-Neighbors. 2017.*	Will be submitted to IWCSN2017
Chenbo Fu, Minghao Zhao, ***Lu Fan****, Xinyi Chen, Jinyin Chen, Zhefu Wu, and Qi Xuan. Link Weight Prediction Using Supervised Learning Methods. 2017.*	Submitted to TKDE

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: 525, 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 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

SUMMARY

Recent graduate, an entry-level data scientist with computer vision and signal processing background. Experienced in implementing recommenders, graph mining algorithms and machine learning techniques on real-world datasets, especially on spatial-temporal data. Skilled in data visualization and generating data report. Highly motivate and creative. Familiar with browsing literature in the immediate area. Great passionate about tech and research.