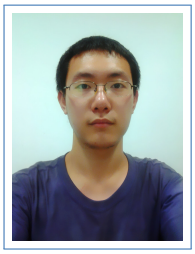

Nan Meng

Personal Information

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Education

2011–Present **University of Electronic Science and Technology of China**, Chengdu, P.R.China.
B.Eng. in Computer Science and Technology (degree expected June, 2015)
Yingcai Experimental School (School of Honor, for top undergraduates)
Rank: Top **10** in comprehensive ranking GPA: **3.9**/4.0

Research Experiences

2011–2013 **Brief investigation on cavitation of micro-bubbles in ultrasonic field**.
Advised by Bao-hua Teng, School of Physical Electronics, UESTC
The correlation between the radius of bubble and stimulate time under different frequencies were investigated on basis of *Noltingk-Neppiras equation*. We analysis the influence of ultrasonic field attenuation on bubble's cavitation and found that the influence of ultrasonic frequency is great.

2013–2014 **Diagnosis of Depression patient based on Machine learning methods**.
Advised by Huafu Chen, QING Gao, MRI Research Center, UESTC
Based on the functional connectivity network of 116 ROIs in human brain, we analyze their **Small World** characteristic, extract the some distinguishable features by **Feature Selection** methods and have a brief study on these features. Classifying the subjects by processing the feature map using **Machine Learning** and some **Statistics** methods

- Preprocessing and analyzing the raw dcm data and get the functional connectivity network of each subject. Then, study their small world characteristics like degree of each point and betweenness centrality to have an overall brief look at these functional connectivity networks.
- Using feature selection and PCA methods to extract some distinguishable features as the features which used to classified in next step.
- Based on the features extracted in the prior step, we employs some machine learning methods like SVM to make a classification of subjects.

2014–Present **Diagnosis of Borderline Personality Disorder based on subgroup discovery**.

Advised by Junming Shao, Web Sciences Center, School of Computer Science and Engineering, UESTC

The purpose of this project is mainly focus on distinguishing the patients with nerve disease from the healthy persons by the method in the field of subgroup learning. We analysis functional brain network data, both raw numeric data and discrete data processed (by self) with the algorithm assuring the distribution of data is unchanged, and trying to find some distinguishable rules both present among the patients and healthy people.

- Preprocessing and analyzing the raw dcm data and get the functional connectivity network of each subject. Then, discretize the numeric data into discrete ones.
- Using the **Subgroup Discovery** method to analysis the the functional connectivity network of each subject to find the most distinguishable learning rules.

2014–Present **Deep Learning introduced in depression diagnosis**.

Advised by Hong qu, Intelligence Laboratory, School of Computer Science and Engineering, UESTC

Deep Learning which developed from neural network is now widely used on the image recognition.We are trying to introduce the some of the models in deep learning like RBM and DBN to neuroscience field to analyze image of fMRI, in order to get some high-dimensional features which can be used to make a classification.

- We first find some papers about basic deep learning knowledge and then we have a meeting and determined to use DBN model to analyze our image.

2013–2014 **Series of Online Projects in the field of Data Science**.

https://github.com/yelangya3826850/Projects-in-the-Data-Science-field/blob/master/README.md

Tracking the John Hopkins data science course, the online data science projects are including the *Human Activity Recognition*, *Cache Time-consuming Computations* and *Personal Activity Analysis*. Processing the data via algorithms in Machine Learning and Artificial Intelligence methods to get some relative ideal results. Projects like *Getting and Cleaning Data* and *Exploratory Study* are aim to train the steps and basic methods of research.

2014–Present **Full credit in eight Data Science online coursers provided by Coursera**.

www.coursera.org

Learned and grasped many data science researching expertise and technology and the ability of using R language and I get all of the full credits.

Honors and Awards

University

2012–2013 **National First Prize in Mathematical Contest in Modeling**.

CUMCM is a national mathematics competition with emphasis on solving real-world problems. We combined **Binary Searching Algorithm** with succinct but preferable **Matching Degree** to repair the teared picture, which was awarded the highest honor (200 out of 23339 teams, 1%).

2012 **The Second Price in Higher Mathematics Contest**.

Higher Mathematics Contest is a national mathematics competition mainly by using **Calculus** and **linear algebra** computation skills and innovative thought.

2011–2013 **The Second-class People's Scholarship three years in a row**.

2011–2012 **The Third Prize in ACM Competition**.

2012–2013 **The Best Department**, Innovative Association.

2011 **Mixed doubles competition in badminton: the second price**.

Skills

Programming C/C++, Java, MATLAB, R, Android Development

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Typesetting LaTeX knitr

Language CET-4, CET-6, TOFEL, GRE

Publication

[1] The Analysis Of The Nature of Hadamard Matrix[J]. Published on the college journal

[2] Brief investigation on cavitation of micro-bubbles in ultrasonic field[J]. Physics Experimentation Vol. 33 No.12 Dec. 2013

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