Nan Chen

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Research Interest

Machine Learning
Data Mining
Brain network modeling and community detection
Dynamic and multimodal brain network
Medical image computing

Education

Lanzhou University M.E. 09/2019-Present
School of Information Science and Engineering, Major in Computer science and technology *GPA: 3.59/4*

Taiyuan University of Technology B.E. 09/2014-06/2018
College of Information Engineering, Major in Automation *GPA: 3.47/4*

Research Experience

Ubiquitous Awareness and Intelligent Solution Lab 04/2019-Present
Lanzhou University *Postgraduate student*

- Participated in the project entitled "Computational model research in neural mechanism of attention" and the project entitled "Method for early diagnosis and intervention of mental disorders based on psychophysiological multimodal information"
- 15 journal papers indexed by SCI and 1 conference paper were submitted (first author 5, other authors 10), in which x of them have been accepted

Work Experience

Data Intelligence Centre 07/2018-04/2019
Inspur *Artificial Intelligence Algorithm Engineer*

- Participated in the Knowledge Mapping Project of China Foreign Languages Publishing Administration, responsible for the development of fundamental NLP tools and the visualization of knowledge mapping
- Participated in the precipitation trend prediction project of Guizhou Meteorological Bureau, responsible for data processing and deep model construction
- Participated in the KGO search project of China Knowledge Centre for Engineering Sciences and Technology, responsible for the searching algorithm

Publications

Nan Chen, Man Guo, Yongchao Li, Shan Li, Zhijun Yao, Bin Hu. "Estimation of discriminative multimodal connectivity using massage-passing-based nonlinear network fusion". *IEEE Journal of Biomedical and Health Informatics*, 2020. Under review.

Nan Chen, Lirong Teng, Man Guo, Yongchao Li, Zhengwu Yang, Yu Fu, Zhijun Yao, Bin Hu. "Automatic Diagnosis of Major Depressive Disorder with Integration of Dynamic and Static Properties of Brain Functional Network". *Artificial Intelligence in Medicine*, 2020, xx(x): xxx-xxx.

Nan Chen, Jie Shi, Yongchao Li, Shanling Ji, Ying Zou, Lin Yang, Zhijun Yao, Bin Hu. "Decreased Dynamism of Overlapping Brain Sub-networks in Major Depressive Disorder". *Journal of Psychiatric Research*, 2020. Under review.

Hong Chai, **Nan Chen**, Shan Li, Lei Fang. " Fusing intensity, texture, shape and deep model-learned information of nodules to differentiate lung cancer and pulmonary tuberculosis on PET/CT images". *Medical Physics*, 2020. Under review. (Co-first Author)

Nan Chen, Guangyao Liu, Man Guo, Yongchao Li, Zhijun Yao, Bin Hu. "Calcarine as a bridge between brain function and structure in Irritable Bowel Syndrome: a fMRI-DTI based multiplex network analysis". *Neurogastroenterology & Motility*, 2020. Under review.

Honors & Awards

Second Prize, Freescale Intelligence Car Competition, 2015
First Prize, China Undergraduate Mathematical Contest in Modeling, 2016
Meritorious Winner, The Interdisciplinary Contest in Modeling, 2017
Individual Scholarship, Taiyuan University of Technology, 2017
cholarship for Science and Technology Practice, Taiyuan University of Technology, 2017
The Third Prize Scholarship, Lanzhou University, 2019
The First Prize Scholarship, Lanzhou University, 2020

Technical Skills

Languages: Python, Java, C/C++, Matlab
Pre-processing Tools: DPABI (fMRI), PANDA (DTI), Brainstorm (MEG)
Scientific Computing Libraries: NumPy, SciPy and Pandas
Drawing Tools: Matplotlib, Seaborn, Origin
Algorithms: Perceptron, kNN, Naïve Bayes, Decision Tree, Logistic Regression, SVM, Boosting, Random Forest, EM, HMM, CRF, Clustering, SVD, PCA, LSA, NMF, LDA, PageRank, BP
Frameworks: TensorFlow, Keras
Other: Matrix Theory, Graph Theory, Optimization, Complex Network, Data Structure

References

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XXX, Professor, Lanzhou University (xxx@lzu.edu.cn, +86)