Xiaoxuan Li

📞 +8618782055537   ✉ l1978190989@gmail.com

Education

Sichuan University   Sept. 2020 – Jun. 2024
Bachelor of Automation   *Chengdu, China*

Core Courses/Scores

- Operational Research/89
- C language programming/92
- Pattern recognition/92
- Artificial Intelligence/88
- Principle of Automatic Control/86
- Machine Learning/(95)

Research Experiences

Laureate Institute for Brain Research–Zheng's lab   Aug. 2023 – Oct. 2023
Volunteer Student   *Research Assistant Professor Haixia Zheng, LIBR*

- Gained proficiency in R programming and statistics for hypothesis testing.
- Demonstrated a sustained and strong intrinsic motivation for pursuing graduate education during summer online interactions.

Laboratory of Brain Imaging and Pattern Recognition   Jul. 2023 – Aug. 2023
Visiting Student   *Professor Huafu Chen, UESTC*

- Acquired a profound understanding of medical image processing.
- Gained expertise in various aspects of medical image research.
- Keep a keen eye on forthcoming trends in medical image processing.
- Building upon the foundation established by previous researchers in the field.

Research Group in Area of Disorders   Jan. 2023 – Jul. 2023
Group Member   *Associate Professor Bin Guo, SCU*

- Collected comprehensive data, including familial addiction to smoking and alcohol
- Utilized Machine Learning models such as SVM, Random Forest, and XGBoost.Applied these models for predictive analysis to determine the likelihood of patients returning to the hospital.
- Aiming to provide insights into the impact of familial addiction on patient outcomes.

Lab in College of BME   Sept. 2022 – present
Research Assistant   *Associate Professor Jiang Zhang, SCU*

- Engaged in the initial phase by acquiring theoretical knowledge of machine learning under the mentorship of my supervisor and his master's students.
- Progressed to conducting research focused on chronic insomnia.
- Employed Non-Negative Matrix Factorization (NMF) to depict individual functional brain networks.
- Utilized the Small World network analysis method to examine brain connectivity patterns.
- Collaborated with the research group to contribute to meaningful insights and findings in this field.

Student Innovation and Entrepreneurship Project   Sept. 2021 – Jul.2022
Team Leader   *Associate Professor Jiang Zhang, SCU*

- Conducted research on Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD) using functional Magnetic Resonance Imaging (fMRI).
- Acquired expertise in the utilization of tools such as DPARSAF for fMRI data preprocessing.
- Configured essential parameters in DPARSAF to align with the specific acquisition parameters of the fMRI images, including Time Points and voxel size.

Publications

- Li, X., Zhang, Z., Qin, T., Wu, J., Zhang, J., Personalized Functional Network Mapping for Chronic Insomnia Disorder(under review)

Honors/Awards

- 2023: First Prize Scholarship in Sichuan University
- 2022: Student Mock Entrepreneurship Competition(Third Prize)
- 2021: Pro Bono Future-Citi Youth Competition(Fourth Place)
- 2021: Interdisciplinary Contest in Modeling(Third Prize)

Research Interests

- Medical image analysis
- Application of machine learning to predict or diagnose disorder and other related research
- Analysis of cognitive functions in the brain

Technical Skills

- Programming: Python(TensorFlow, Pytorch, Scikit-Learn, Keras, LifeLines), R, C/C++, Javascript
- Familiar with Latex, Mricron, Endnote
- Familiar with DPARSFA and Gretna