Xiaowei Yu

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Education

University of Texas at Arlington, Texas, USA Aug 2020 – May 2025
Ph.D. student in Computer Science, GPA 4.0
Research Interests: ***Medical Image Analysis, Machine Learning***
Shanghai Jiao Tong University, Shanghai, China Sep 2016 – Mar 2019
M.S. in Information Science, GPA 3.44
Thesis: Doppler Estimation for Underwater Communications
Northwestern Polytechnical University, Xi'an, China Sep 2012 – Jun 2016
B.E in Information Science, GPA 3.87

Work Experience

University of North Carolina at Chapel Hill, *Research Assistant* Jun 2021 – Aug 2021
Infant Brain Functional Connectome Prediction *Chapel Hill, NC*
- Implemented and trained an intensive triplet autoencoder in Pytorch.
- Disentangled identity-related and age-related features from latent representations.
- Trained model can conduct efficient functional connectome predictions at different ages.

Project

Adopt Machine Learning Algorithms for Floor Sensor-based Fall Detection System
- Designed and implemented a pressure sensor-based fall detection system.
- Collected the pressure data and analyzed data in the time domain and frequency domain.
- Adopted various machine learning algorithms for fall detection performance comparison.

Space-time Disentangled Twin Transformers for Brain Network Discovery
- Implemented a pure transformer model with for brain network discovery in a self-supervised way.
- Designed a twin Transformer structure for space-time disentanglement.
- Found the task-activated brain network and the results consistent with the existing works.

Selected Publications

Xiaowei Yu, Norman Scheel**,** Lu Zhang, David Zhu, Rong Zhang, and Dajiang Zhu. "Free water in T2 FLAIR White Matter Hyperintensity Lesions", *AAIC*, 2021.

Xiaowei Yu, Yao Xue. " Space-time Disentangled Twin Transformers for Brain Network Discovery ", *IJCAI*, 2022 (under review).

Skills and Tools

Proficient in Python, PyTorch, C, Matlab, Bash