

Mr. Zheng Peirong^(04/04/2000)

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EDUCATION BACKGROUND

- 08/2022-present Nanyang Technological University(NTU)**
- ❖ Program: MSc in Communications Engineering(School of Electrical and Electronic Engineering)
 - ❖ Main Courses: Computer Control Network, Video Signal Processing, Wireless and Mobile Radio Systems.
- 09/2018-07/2022 University of Electronic Science and Technology of China(UESTC)**
- ❖ Program: BEng in Communication Engineering(Yingcai Honors Program of UESTC)
 - ❖ CGPA: 3.65/4
 - ❖ TOEFL(iBT): 103
 - ❖ Main Courses: Programming Design Methods, Data Structure and Algorithm, Computer Networks, Digital Signal Processing.
 - ❖ Programming Skills: Python, Matlab, C Language
 - ❖ Awards:
 - Yingcai Honors Program, 2018-2022 Academic year, UESTC 06/2022
 - Model Student Scholarship, 2020-2021 Academic Year, UESTC 12/2021
 - Model Student Scholarship, 2019-2020 Academic Year, UESTC 12/2020
 - The Freshman Scholarship, UESTC 09/2018
- 08/2019 Magdalene College, Cambridge Summer Institute; Oriel College, Oxford Summer Institute**
- ❖ Environment, Science, and Technology: Key Issues(94)
 - ❖ General Studies: Business Management, Entrepreneurship, International Relations, and History
 - ❖ Artificial Intelligence with a Focus on Search
 - ❖ General Studies: Professional Skills, Literature, and Physics

RESEARCH EXPERIENCES

- 10/2021- 06/2022 Researcher, Graduation Project**
- Supervisor: Dakun Lai(Associate Professor), UESTC-BMI-EP**
- ❖ Established a comprehensive database by integrating data from three public databases and conducted meticulous preprocessing. The database comprised a total of 855,882 heartbeat activities, including 30 segments of Paroxysmal Atrial Fibrillation (PAF) and 30 segments of normal heart rate.
 - ❖ Designed a robust semi-supervised learning model utilizing a convolutional auto-encoder (CAE) architecture. Implemented on TensorFlow, the model achieved an impressive accuracy of 90.16% using only 10% of the available training data for binary classification of ECG signals.
 - ❖ Successfully published the research outcomes in the prestigious conference EMBC'23, and scheduled to give an oral presentation to highlight the significance of the findings.
- 07/2021- 08/2021 Researcher, 2021 First-class Universities and Disciplines of the World Research Project**
- Communication and Sensing Technology**
- Supervisor: Han Xu(Associate Professor), HUST-SNCL**
- ❖ Attended the courses and finished the assigned tasks
 - ❖ Engaged in using MATLAB to finish the final paper and make charts and diagrams
 - ❖ Completed the research proposal and submitted the piece of writing

PUBLICATION

- Submitted to JBHI ❖ *Dakun Lai, Peirong Zheng (second author), Yuchen Jiang and Yuxiang Bu, “PAFNet: A Real-time Deep Learning Model for the Prediction of Paroxysmal Atrial Fibrillation Onset using Single-lead ECG”*
- Published in
EMBC’23 ❖ *Yuchen Jiang, Peirong Zheng (co-first author) and Dakun Lai, “A Semi-supervised Algorithm for Atrial Fibrillation Attack Prediction Using Convolution Auto-encoder of Time Series Signal.”*

SKILLS

- Programming ❖ PyTorch
❖ TensorFlow
❖ MATLAB