Shen Ou-yang

Nanjing University Xianlin Campus, 163 Xianlin Road, Qixia District, Nanjing
+86-13376064311 shen.ouy03@gmail.com github.com/yunzinan yunzinan.top

"Everything we imagine will turn into reality."

Education

Nanjing University, Nanjing, China **Sept. 2023 – Present**
Computer Science and Technology *GPA: 4.62/5 Rank: 3/229*

Nanjing University, Nanjing, China **Sept. 2021 – June. 2023**
*Applied Chemistry** *GPA: 4.53/5 Rank: 5/119*

*My major was adjusted to Chemistry and Life Sciences when I first enrolled in university. During the first two years of my undergraduate studies, I studied both Applied Chemistry and Computer Science and Technology. Afterwards, I switched majors to study Computer Science.

Research Interests

- Brain-Computer Interface
- Deep Learning
- Multimodal Learning
- Computational Neuroscience

Research Experiences

Research Intern **Feb. 2024 – Present**
Multimedia Lab, the Chinese University of Hong Kong(remote) *Mentored by Asst.Prof. Xiangyu Yue*

- Aiming to leverage the power of LLM for brain decoding and learning representations.
- Currently in early stage :)

Scientific Research Intern Course **July 2023 – Present**
Supervised by Dr.Guihuan Feng, Software Institute in Nanjing University

- A compulsory course for CS students that allows them to freely choose research directions and mentors based on their personal interests.
- Developing an understanding of the background and fundamental knowledge of brain-computer interfaces (BCIs) by engaging with the literature.
- Trying to master the fundamental EEG-based BCI techniques and learning to apply machine learning for signal analysis and recognition through project-based practice.
- Leading a National College Students' Innovation training program.
- Applying for a Chinese patent.

Projects

EEG-Based Brain-Computer Interaction in Virtual Reality | *BCI, AI, VR* | link **Sept. 2023 - Dec. 2024**

- Hosted as a National College Students' Innovation training program.
- **Motion Intention Recognition**: Proposing a method that uses a non-invasive brain-computer interface to read the user's motion intentions. These intentions are then parsed by a machine learning classifier into specific motion control signals (forward/turn left/turn right), enabling navigation in virtual reality environments via brain signals only.
- **Affective Computing**: Achieve real-time reading of the user's psychological state (such as positive/neutral/negative, as well as levels of focus/relaxation). The real-time brain signals are decoded into emotional states, exploring a new dimension of interaction in VR.

Skills

Programming: C/C++, Python, PyTorch, Linux, MATLAB
Language: Chinese(Native), English(Fluent, CET-6 618, TOEFL 103(Speaking:25))

Honors & Awards

- the People's Scholarship($\leq$ 15%), Nov.2023
- CCF-CSP top 6.8%, Dec.2023
- Nanjing University Collegiate Programming Contest, Silver Medal(div.2), rk.7(11%), May.2023
- LeetCode Cup 2023 Spring Programming Contest, top 4%, May.2023
- Nanjing University Collegiate Programming Contest, Silver Medal(div.2), rk.9(13%), May.2022