# **Sitong CHEN**

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#### **EDUCATION**

#### Southern University of Science and Technology

Sep. 2022 -

Biomedical Engineering

- ➤ GPA: 3.73/4.00, Weighted Average Score: 89.76
- Scholarships: Freshmen Scholarship (Second Prize, \$1380), The Third Class of the Merit Student Scholarship (\$210)
- Core course: Machine Learning and Its Medical Engineering Applications(A), Intelligent Sensing Technology(A), Medical image processing(A), Neural Engineering and Brain-computer Interface(A-)

### RESEARCH EXPERIENCE

#### Southern University of Science and Technology, China

#### **Experiment Conductor, Construction of ChineseEEG-2 Dataset**

June. 2024 - Jan. 2025

Mentors: Dr. Quanying Liu

- Conducted the main experiment on the construction of the ChineseEEG-2 multimodal EEG dataset, focusing on cross-modal semantic alignment and neural decoding during reading and listening tasks, performed data preprocessing and analysis including Inter-Subject Correlation and audio reconstruction.
- Designed experimental protocols for recording EEG and audio data acquisition during reading-aloud and passive-listening tasks.
- Supervised on-site data collection in Macau, ensuring alignment of triggers for temporal synchronization between EEG signals and linguistic stimuli.

#### Achievements:

Contributed to dataset standardization under the EEG-BIDS framework; Authored sections of the technical validation protocol for inter-subject correlation analysis.

#### Southern University of Science and Technology, China

#### Team Member, Multimodal Speech Neural Decoding Project

Jan. 2025 – present

Mentor: Dr. Quanying Liu

- Explored cross-modal neural decoding by aligning EEG signals with speech representations in latent space, and reconstruct the audio or text from foundational large language models (LLMs) like Wav2Vec2 and BERT.
- Implemented multimodal alignment algorithms using Python and TensorFlow to map EEG embeddings to audio-text semantic spaces.
- Conducted statistical validation of model performance through inter-subject correlation (ISC) and stimulus reconstruction metrics.

#### Achievements:

Achieved improved neural decoding accuracy compared to baseline models; Presented basic structure at the 2024 BME Research Day in Southern University of Science and Technology

## **PUBLICATIONS**

**Sitong Chen**, Beiqianyi Li, Cuilin He, et al. *ChineseEEG-2:An EEG Dataset for Multimodal Semantic Alignment and Neural Decoding during Reading and Listening[DS/OL]. V1.* Science Data Bank, 2025[2025-03-12]. https://cstr.cn/31253.11.sciencedb.20611. CSTR:31253.11.sciencedb.20611.

## **AWARDS & HONOURS**

Second Prize in the Freshmen Scholarship	Nov. 2022
Grand Prize in the 2nd "Yanxing Cup" English Application Skills Competition	Nov. 2022
Finalist Award for Competent Organizer in "Returning to Hometown" in the Campus Committee	Jan. 2023
Third Prize in "Understanding Contemporary China" Interpretation Competition ("Guocai Cup")	March 2023
Second Prize in the National English Competition for College Students (NECCS)	Jun. 2023
"BME Research Day" Outstanding Poster Award	Nov. 2024
Third Prize in the "Rixin" Training Camp Roadshow	Dec. 2024
Finalist project in 19th "Challenge Cup"	Feb 2025

## **SKILLS**

#### Language Skills:

- English (CET-6: 624, CET-SET6 A, IELTS, 7.5); excellent reading comprehension of scientific literature, capable of independently writing academic papers in English, and proficient in communicating research findings with advisors.
- Mandarin (Native).

**Programming and Software Proficiency:** Python, MATLAB, Java, LaTeX, PyCharm, MicrosoftOffice **Specialty:** Taekwondo (Reached Green belt / blue tip), Indoor Rowing (Reached second-level athlete standard), Piano (Reached Grade 10)