

Siyuan Li (黎思源)

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EDUCATION

Shanghai University

09/2021-06/2025

B.E. in Artificial Intelligence

GPA: 3.82/4.0 (93.94/100), Ranking: 1/52

Key courses: Calculus(94), Linear Algebra(100), Object Oriented Programs(94), Probability and Statistics(95), Data Structure(97), Pattern Recognition(90), Computer Vision(91), Operations and Optimization(88), Data Mining and Knowledge Processing(94), Mathematical Logic(95), Principles and Techniques of Large Language Models(95), Principle and Algorithm of Artificial Intelligence(93)

RESEARCH & INTERNSHIP

Research in SHU Brain-like Computing Center Lab | AI for Recognizing Preference | Leader

04/2024-09/2024

Advisor: Prof. [Huiran Zhang](#) (Shanghai University)

- Proposed a novel ERP composite formula for analyzing human preferences.
- Achieved effective classification of preferences using AI methods combined with the developed formula.
- Authored a manuscript as the first author titled "Brain Responses to Preferences: Insights from ERP Components and Emotional Processing" which is prepared for submission.

Research Intern in Westlake University | Rule Discovery in Physical Data/Video | Leader

07/2023-06/2024

Advisor: Prof. [Tailin Wu](#) (Westlake University), Prof. [Sebastian Musslick](#) (Brown University)

- Developed a transformer-based model and programmed it to experiment with symbolic regression tasks.
- Modeled and transferred symbolic regression tasks to the domain of videos.
- Explored the discovery of physical system patterns from videos to empower scientific discovery tasks.

Research in Shanghai University | Video Frame Interpolation with PVT | Leader

04/2023-06/2023

Advisor: Prof. [Hang Yu](#) (Shanghai University)

- Reviewed relevant literature according to task requirements and established a PVT-based encoder U-net model.
- Wrote code and conducted experiments, achieving state-of-the-art results in terms of SSIM performance.

PROJECTS

All project repositories: <https://github.com/liaoyanqing666>

Cross-Modal Pretrained Model Alignment

07/2024

- Proposed and implemented a method to quickly align pre-trained models from different modalities.
- Designed a twin neural network similarity module to align pre-trained models with varying embedding dimensions.
- Achieved rapid model alignment between text and image modalities with minimal training on a standard image classification dataset, rather than requiring a large "image-description" dataset typical for models like CLIP.
- Experimentally demonstrated the project's ability to align quickly with minimal GPU requirements and satisfactory performance.

Reproduction and Experimentation of Paper of TextCNN

03/2023

- Reproduced and experimented with the TextCNN model.
- Performed tokenization and encoding of sentence content, followed by padding or truncating sentence lengths.
- Implemented word embedding and utilized multiple convolutional kernels of varying sizes for feature extraction, pooling, and final classification through fully connected layers.

Force Video Classification Based on CNN-LSTM

02/2023

- Developed a network model based on CNN for video frame feature extraction and LSTM for sequential frame feature computation.
- Compared the classification performance of KNN and ANN after freezing the feature extraction model parameters.
- Achieved 92% accuracy on a public dataset, comparable to results from another study using a non-public dataset.

Handwriting Recognition System Based on Siamese Neural Networks

11/2022

- Independently designed and coded a system utilizing VGG16 for signature feature extraction.
- Achieved 100% accuracy on the CEDAR dataset using Siamese neural networks for classification.
- Developed frontend-backend interaction programs enabling the utilization of training results on web platforms.

PAPERS

Siyuan Li, Xiangze Meng, Yijian Yang, Yiwen Xu, Yunfei Wang, Chenghu Qiu, Hanyi Jiang, Pin Wu, Shengbo Chen, Xiao Wei, Hao Wang, Lan Ni, Huiran Zhang. (2024). ERP-based Emotional Preference Brainwave Features: From Visual Stimuli to Preference Evaluation. (Under Review)

Yuhang Guo, **Siyuan Li (Co-first author)**, Jinxuan Wu. (2023). Research advanced in offline handwritten signature verification. Applied and Computational Engineering, 6(1), 1244-1252. DOI: 10.54254/2755-2721/6/20230653.

AWARDS

ASC Student Supercomputer Challenge National Second Prize	02/2024
ICPC (International Collegiate Programming Contest) Asia Regional Contest (Hefei) Bronze Medal	11/2023
ICPC (International Collegiate Programming Contest) Asia Regional Contest (Nanjing) Bronze Medal	11/2022
Group A of C/C++ Division of Blue Bridge Programming Cup National Third Prize	06/2023
Group A of C/C++ Division in Shanghai Division of Blue Bridge Programming Cup First Prize	04/2023
CCPC (China Collegiate Programming Contest) Shanghai Programming Contest Silver Medal	10/2022

SKILLS & QUALIFICATIONS

Programming language: Python (Advanced), C++ (Proficient), Matlab (Familiar)

Software: Git&Github, Office Word, LATEX, Markdown, Remote SSH of VSCode

AI-related skills: Pytorch (Advanced), Transformers (Proficient Understanding), LLM (General Understanding)

SCHOLARSHIP & HONORS

First-class Academic Scholarship	11/2023&11/2022
Leadership Scholarship	11/2023&11/2022
Innovation Scholarship	11/2023&11/2022
Loving Heart Volunteer Scholarship	11/2023&11/2022
Outstanding Student of Shanghai University	11/2023&11/2022
Top 100 Outstanding Students of Shanghai University	05/2023

EXTRACURRICULAR & VOLUNTEER ACTIVITIES

New Media Center, School of Computer Engineering and Science | Chairman 01/2022-01/2023

- Managed content publication on the School of Management's official WeChat account and coordinated daily tasks.
- Organized and managed recruitment presentations, student representative meetings, and other related affairs.

ByteDance | Campus Ambassador 03/2022-06/2022

- Assisted Bytedance company in promoting spring recruitment and summer internship, distributing local push manual and internal push code.

Volunteer time: 100h+