

EDUCATION

- **Shanghai Jiao Tong University** Shanghai, China
Bachelor of Engineering, Electronic Information (IEEE pilot class) Sept 2021 - Current
 - ▶ **Overall GPA:** 92.89/100.00, 4.06/4.30, (Rank 6/129)
 - ▶ **Selected Courses:**
 - 📖 **Computer Science:** Design and Analysis of Algorithms (A+), Principles and methods of program design (A+), Programming Practice (A+), Computer Network (A+), Operating System (A+), Programming Languages and Compilers(A+), Natural Language Processing (A+)
 - 📖 **Mathematics:** Mathematical Analysis (A+), Linear and Convex Optimization (A+), Information Theory (A+), Complex Analysis (A+), Probability Statistics (A+)
 - ▶ **Additional Academic Pursuit:** Engaged in a dual degree program in Mathematics and Applied Mathematics. Coursework includes: Complex Analysis, Abstract Algebra, Linear Algebra II

PUBLICATIONS

- **Seeing is not always believing: The Space of Harmless Perturbations** (In Submission)
Lu Chen, Shaofeng Li, Benhao Huang, Fan Yang, Yuan Luo
- **Defining and Extracting Generalizable Interaction Primitives from DNNs** 🔗 [Code](#) 📄 [Paper](#)
Lu Chen, Siyu Lou, Benhao Huang, Quanshi Zhang
International Conference on Learning Representations (ICLR 2024)

EXPERIENCE

- **SJTU-XAI-Lab** Shanghai, China
Undergraduate researcher, supervised by Prof. Quanshi Zhang. Feb 2023 - Jan 2024
 - ☰ Artificial Intelligence Interpretability
 - ▶ **DNN Interactions Extraction Project**
 - Given different DNNs trained for the same task, developed a method to extract their shared interactions.
 - By conducting contrast experiments, we showed that the extracted interactions can better reflect common knowledge shared by different DNNs.
 - I helped design the algorithm that balanced the generalization ability and sparsity of model interactions.

PROJECTS

- **Chinese Slot Language Understanding** Shanghai, China
CS3602 Natural Language Processing Dec 2023
 - Developed a BERT-based pipeline for Chinese slot understanding.
 - Incorporated Lexicon information into the BERT backbone and achieved an improved result (from 77.99% to 79.44% in accuracy) on the given noisy dataset. 🔗 [GitHub](#) 📄 [Report](#)
- **AAPMT: AGI Assessment Through Prompt and Metric Transformer.** Shanghai, China
CS3324 Digital Image Processing Dec 2023
 - Developed a interrelationship-based AGI metrics evaluation system allowing for the simultaneous evaluation of multiple AGI metrics.
 - Designed and implemented "Metric Transformer", where attention mechanism is applied to calculate each of metric jointly. 🔗 [GitHub](#) 📄 [Report](#)
- **TranBlend: An Experimental Fusion of Textual Input in Saliency Prediction Models** Shanghai, China
CS3324 Digital Image Processing Dec 2023
 - Developed a model to simulate the text descriptions' influence on human's attention on images reflecting by saliency maps.
 - Blended image features from ViT and text features from BERT using cross-attention to enhance the performance of TransalNet. 🔗 [GitHub](#) 📄 [Report](#)
- **Adaptive Huffman Coding: Analysis and Applications** Shanghai, China
ICE2601 Information Theory Course Project May 2023
 - Further enhanced the incremental Huffman strategy by adaptive Huffman coding to train Continuous Bag of Words (CBOW) model faster and better. 🔗 [GitHub](#) 📄 [Report](#) 📄 [Slides](#)

- Shanghai Jiao Tong University Classroom Information Website** Shanghai, China
ICE2604 Introduction to Software Engineering Course Project *Dec 2022*
 - Developed a website to help students find comfortable study spaces at SJTU.
 - Used Vue2 as the frontend framework, Elasticsearch and Logstash as the search engine, ECharts for data visualization. [🔗 GitHub](#) [📄 Demo](#)
- SNAKE Game: Pixel** Shanghai, China
CS1605 Programming and Practice Course Project *July 2022*
 - Designed a SNAKE Game using C++ pdcourses.lib.
 - Implemented some interesting game props such as "Rewarding Time" and "Freezing Speed" as well as AI Snake mode. [🔗 GitHub](#) [📄 Slides](#) [📄 Demo](#)

HONORS AND AWARDS

- Rui Yuan-Hong Shan scholarship (Rank 3/129) *2023*
- Academic Excellence Scholarship of SJTU (top 10%) *2022, 2023*
- Shao Qiu scholarship (Rank 5/129) *2022*
- Mathematical Contest In Modeling (Meritorious Winner) *2022*

MISCELLANEOUS

- Programming**
 - Proficient: Python (PyTorch, NumPy, Manim, etc.), C/C++, L^AT_EX
 - Familiar: MATLAB, HTML/CSS, JavaScript, Vue, Linux, Shell , Verilog
- Language**
 - English (fluent) TOEFL 107(S24), GRE 327(V157 + Q170)
 - Mandarin (native) MATLAB, HTML/CSS, JavaScript, Vue, Linux, Shell , Verilog
- Service**
 - Member of the Outreach Department, SJTU Spark Program *Oct 2021 - Sept 2022*
 - Member of Academic Department, SJTU Student Backbone Training Program *Feb 2023 - Sept 2023*
 - Student Mentor of CS2601 Convex Optimization, SJTU *Oct 2023 - Feb 2024*
 - Student Mentor of CS2612 Programming Languages and Compilers, SJTU *Oct 2023 - Feb 2024*