Xianzhe Fan

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EDUCATION EXPERIENCE

Undergraduate of the Tsien Engineering Excellence Program (TEEP) September 2021 - July 2025
Xingjian College, Tsinghua University, GPA: 3.82/4.00
Major ranking 9/28, top 30% in the department (eligible for recommendation for postgraduate studies)

TECHNICAL SKILLS

Skills	Audio Signal Processing, Computer Vision, Machine Learning, Deep Learning, User Interface Design, User Research, Data Analysis, Visualization
Programming Languages	Python, C/C++, Java, Go
Professional Software	VScode, Android Studio, Multisim, SolidWorks, AutoCAD
Drawing & Typesetting	Adobe Audition, Adobe Photoshop, LaTeX
English Level	TOEFL: 106

ACADEMIC PAPERS

Submitted a **first-author** long paper to CHI and was accepted by CHI' 24
Xianzhe Fan, Zihan Wu, Chun Yu, Fenggui Rao, Weinan Shi, and Teng Tu. 2024. **ContextCam: Bridging Context Awareness with Creative Human-AI Image Co-Creation.** In Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI' 24), May 11–16, 2024, Honolulu, HI, USA. ACM, New York, NY, USA, 17 pages.

PROJECT EXPERIENCE

Establishing a Trustworthy RAG Intelligent Data Management System October 2023 - Present
Research Project

- A RAG data management system combined with LLMs capable of providing natural language query capabilities based on user files.
- Mainly responsible for table data parsing, knowledge extraction, literature research, and determining research topics. The system builds models of user psychology and automatically adjusts the content displayed based on their level of trust. The user's trust level is calculated based on their understanding of the system, behavior during use (clicking, data review, etc.), and proactive rating after Q&A.

Face Recognition System in Unconstrained Environments October 2023 - December 2023
Course Project

- Designed an unconstrained face recognition system based on ResNet and Triplet Loss/Angular Loss algorithms, capable of determining if two photos are of the same person. The image recognition accuracy reached 92%.
- Received an A in the "Introduction to Deep Learning" course.

GIX International Summer Research Program July 2023 - September 2023
Summer Research Project (Advisor: Chun Yu)

- Researched integrating context awareness in human-AI co-creation of images. Submitted a first-author long paper to CHI and was accepted by CHI24.
- ContextCam: Bridging Context Awareness with Creative Human-AI Image Co-Creation

Application of API Chain in AI Painting Interactive Agents March 2023 - September 2023
SRT Project (Advisor: Chun Yu)

- Designed an AI painting application based on API Chain for use in AI painting interactive agents, converting users' natural interactive expressions into control over the API Chain, enabling users to easily generate and modify images according to their needs. Lowered the technical barriers to AI painting and optimized user experience.

"Ijiaodui" Intelligent Customer Service Prompt Design January 2023 - March 2023

· Designed ChatGPT prompts and integrated its functions into the "Ijiaodui" WeChat public account customer service.

Visualization Analysis and Algorithm Optimization of Dual Mic Noise Reduction March 2022 - March 2023

SRT Project (Advisor: Chun Yu)

· Implemented dual microphone noise reduction, speech recognition, and visualization in python, and subsequently developed an Android app for mobile phones.

Context-Aware Smart Desktop Interaction March 2022 - June 2022

Course Project (Received an A in the "Theory and Practice of Human-Computer Interaction" course.)

· Implemented context awareness based on technologies like facial recognition. For example, privacy protection during group discussions, program handoff, mobile control of computers and computer replying to mobile messages, sit-to-unlock, etc.

Chess Game Based on Qt April 2022 - May 2022

Course Project (Received an A- in the "Fundamentals of Computer Programming" course.)

· Developed a chess game using Qt, including basic movement rules and advanced game mechanics (e.g., pawn promotion, castling, check, etc.). The game features a timer and a user-friendly interface. Supports AI vs. player and player vs. player modes.

RELEVANT COMPUTER SCIENCE COURSES AND GRADES

- Introduction to Deep Learning A
- GIX International Summer Research Program A
- Pattern Recognition and Machine Learning A
- Undergraduate Research Training Program (SRT) *2 A
- Data Structures A-
- Theory and Practice of Human-Computer Interaction A
- Electrical Engineering and Electronics Technology A
- Fundamentals of Computer Programming A-
- Probability and Mathematical Statistics A-

ACHIEVEMENTS

"Tsinghua Scholar Talent Program" Scholarship *2022, 2023*
"Excellence in Science and Technology Innovation" University-level Scholarship *2022, 2023*
Technical Leader of the "AI Research Project on Image Generation" under the Future Scientists and Information Technologists Interest Group *2023*
Selected for the Second Phase of the Xingjian College "HeYe Plan" *2023*
Second Prize in the Beijing Division of the National College Students' Mathematical Modeling Contest 2022 (as team leader) *2022*
"WuXing Cup" Third Prize and Academic New Star Award at Xingjian College *2022*
First Prize in the 38th National College Students' Physics Competition *2021*
First Prize at the Provincial Level in the 37th National High School Students' Physics Competition *2019*

DECLARATION

I hereby declare that all the information provided above is true.