Zedong Peng

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EDUCATION

Shanghai Jiao Tong University. Master of Engineering in Computer Science, under Prof. Jieru Zhao, 2024 - 2027.

Shanghai Jiao Tong University. Bachelor of Engineering in Electronic Engineering, 2020 - 2024.

ACADEMIC AND PROFESSIONAL EXPERIENCE

Research Intern, National Center of Technology Innovation for EDA. (July 2024-Present).
- Conducting research on AI4EDA, focusing on hardware and software co-design, under Prof. Qiang Xu & Prof. Jieru Zhao

Intern, Intel Asia-Pacific Research & Development Ltd. (November 2023-July 2024).
- Contributed to the Apache Gluten project by addressing technical issue, optimizing CI/CD pipelines, and monitoring query performance to improve system reliability and scalability.
- Explored the implementation of a Text-to-SQL model and successfully developed a functional demo, focusing on data preprocessing and query generation.

Research Intern, Data Science Institute, Imperial College London (January 2024 - February 2024).
- Worked on natural language processing applications, specifically using vector representations to analyze word count features related to COVID-19 and performing similarity analysis on the data.

Research Intern, Cooperative Medianet Innovation Center, SJTU(February 2023-July 2023).
- Engaged in research on long-tail multi-label machine learning under Prof. Jiangchao Yao.

Research Intern, John Hopcroft Center for Computer Science, SJTU. (July 2022-July 2024).
- Contributed to security-focused machine learning research under Prof. Liyao Xiang. One paper accepted for publication in IEEE Transactions on Dependable and Secure Computing (TDSC).

HONORS AND AWARDS

Outstanding Graduate of Shanghai Jiao Tong University, 2024

2nd Prize of the 13th National University Mathematics Competition, 2021

1st Prize of Shanghai Jiao Tong University "Yunhan Cup" RobotMaster Intramural Competition, 2021

Liu Yongling Foundation Scholarship, 2021

Advanced Individual in Social Practice of Shanghai Jiao Tong University, 2021

PUBLICATIONS

H. Duan, **Z. Peng**, L. Xiang, Y. Hu and B. Li. "A Verifiable and Privacy-Preserving Federated Learning Training Framework," *IEEE Transactions on Dependable and Secure Computing*, Sept.-Oct. 2024.

PROJECTS

Robotic Dog Development. Student Innovation Center, SJTU & Xiaomi (November 2023 - November 2024) Implemented AI algorithms for movement and interaction capabilities, under Prof. Weiming Zhao. Tech: Python.

VR Game *Strange Zoo*. VR & AR design and development practice, CS085 (September 2021-January 2022). Implemented an original VR adventure puzzle game. Tech: Unity3D, C##, Microsoft Virtual Reality.

Reliability Assessment and System Optimization of a Multi-Node Sonar System Modeling and Simulation of Engineering issues, ICE2305 (September 2021-January 2022). This study investigates the relationship between the number of nodes and the operational lifespan of a sonar system, and provides an optimal solution. Tech: MATLAB, Monte Carlo method, Markov chain.

Robot Design and Control Shanghai Jiao Tong University "Yunhan Cup" RobotMaster Intramural Competition (September 2021-January 2022). Designed and fabricated a complex robot, with Arduino for electronic control and C programming for motor and servo control. Achieved 1st Prize. Tech: C, Arduino, SolidWorks.

Automatic Tracking Camera Engineering Practice, SI1210 (February 2021-June 2021). Developed and deployed face recognition algorithms using OpenCV. Implemented automatic camera tracking with Raspberry Pi. Tech: Python, Linux, Raspberry Pi.

SKILLS

Programming: C++, Python, SQL, Verilog, Shell, Docker, MATLAB.

Languages: Chinese (Native), English (CET6:481), German (A1)

SERVICE

Student Representative, Department of Electronic Engineering, Shanghai Jiao Tong University (September 2020-September 2022).

Community Volunteer (January 2021-February 2021).

Leader of Summer Social Practice, Shanghai Jiao Tong University (June 2021-September 2021).