Resume

Master’ s Student at Hefei University of Technology

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Zhang Sheng | February 29, 2000 | Male |

Basic Information

- Master’ s student at Hefei University of Technology (expected graduation: 2025).
- Actively participated in various academic competitions in China.
- served as Class Representative and President of the Science and Innovation Association during undergraduate studies.
- One internship experience at a top company.

Education

Hefei University of Technology (Sep 2022 - Jun 2025)

- GPA：3.48/4
- **Major: Network and Information Security (Master’ s Degree)**

Taiyuan University of Science and Technology (Sep 2018 - Jun 2022)

- GPA (Core Courses): 3.34/4.0
- **Major: Software Engineering**

Academic Papers

- [1] Accelerating beam-tracing method with dynamic parallelism on graphics processing units**(First author, submitted)**
- [2] Multimodal Fusion for Fraud Detection in Blockchain Transactions Using GCN and BERT**(First author, submitted)**
- [3] Optimizing Acoustic Field Rendering Through Heterogeneous Computing**(Accepted by SPCIS Conference, indexed by EI)**
- [4] Jia Y, Wang Y, Sun J, Zhang S. Ethereum Fraud Detection via Joint Transaction Language Model and Graph Representation Learning[J]. arXiv preprint arXiv:2409.07494, **2024.(Submitted to AAAI Conference)**
- [5] Zhang Sheng, Qin Yi. Design and Implementation of an Android-based Epidemic Prevention App [J]. Computer Programming Skills & Maintenance, 2021(09): 84-85+105. DOI: 10.16184/j.cnki.comprg.2021.09.032.

Patents

- [1] Zhang Sheng, Lishu Duan, Hanbo Jiang . A GPU-Based Dynamic Parallel Gaussian Beam Tracing Method [P]. Zhejiang Province: CN118565603A, 2024-08-30.

Awards & Honors (During postgraduate)

- Second Prize, 2022 Asia and Pacific Mathematical Contest in Modeling (APMCM)

Awards & Honors (During undergraduate)

Provincial/National Level:

- First Prize, 3rd National College Students' Algorithm Design and Programming Challenge (2021-2022).
- Third Prize, 2nd National College Students ' Algorithm Design and Programming Challenge (2020-2021).
- Third Prize, 1st National College Students' Olympiad in Mathematics (2021-2022).
- Second Prize, 3rd IT Skills Competition by Chuanzhi Cup (2020-2021).
- Third Prize, National College Computer Capability Challenge, C++ North China Region (2019-2020).
- Second Prize, "Mount Everest Challenge" Team Programming Contest (2019-2020, 2020-2021).
- Second Prize, Shanxi Region, 11th Blue Bridge Cup C/C++ Programming Contest.
- Third Prize, Shanxi Region, 10th Blue Bridge Cup C/C++ Programming Contest.

University Level:

- Received five academic scholarships
- Received five awards for competition excellence, academic progress, and technological innovation

Postgraduate Projects

Scam Smart Contract Detection Project ***2024.07 - Present***

(Singapore Management University Yue Duan Lab)

- Keeping it a secret for the time being

AI and Blockchain Fraud Detection

(Zhejiang University, Haitao Xu Research Group) ***2024.03 - 2024.06***

- Proposed the ETH-GBERT model, combining Graph Convolutional Network (GCN) to capture global relations in blockchain transaction networks and BERT for extracting local semantic information from transaction text data.
- Developed a complete data processing pipeline, including transaction data extraction, account-based adjacency matrix generation, N-gram time difference feature calculation, and transaction text data cleaning and labeling.
- Outperformed baseline models (e.g., BERT4ETH, GCN, DeepWalk) on multiple datasets in terms of accuracy, F1-score, and recall.
- Produced two papers [2][4].

GPU Acceleration of Acoustic Ray Tracing Software ***2023.09 - 2024.01***

- Studied CUDA programming model, focusing on memory management, thread organization, and kernel function implementation.
- Refactored software modules from C++ to CUDA C, ensuring computational logic correctness and data consistency.

- Achieved nearly 800x acceleration through performance tuning, including memory access optimization, parallel execution strategy adjustments, and effective use of hardware resources.
- Authored development notes (~100,000 words) and obtained an Nvidia CUDA training certificate.
- Produced two papers [1][3] and one patent [1].

GPUPixel Rebuild Project ***2023.07 - 2023.08***

(iFlytek AI Research Institute)

- Analyzed the GPUPixel rendering flow and evaluated the strengths and feasibility of OpenFace_API and VNN model.
- Developed image output functionality to generate beautified images and facial landmark images; explored the feasibility of the Xvfb virtual server scheme and found EGL-based image output infeasible.
- Replaced the original GLFW library with EGL for better adaptation.
- Gained in-depth understanding of the underlying mechanisms of graphical rendering, particularly in headless environments.

Acoustic Ray Tracing Software Reconstruction (Fortran to C++)(7000 lines code) ***2023.01-2023.06***

- Analyzed and understood the logic and structure of legacy Fortran code.
- Reconstructed software modules using C++, ensuring consistency with the original logic.
- Conducted comprehensive testing to verify that the new implementation matched the original in functionality and performance.
- Successfully migrated the software, improving maintainability and readability.

Undergraduate Projects

Undergraduate Thesis: "Design and Implementation of an E-commerce System Based on Recommendation Algorithms" (Excellent Thesis) ***2022.01-2022.06***

- Completed requirement analysis, overall design, front-end and back-end development, testing, and deployment.
- Designed and implemented core algorithms for user browsing behavior, item similarity recommendations, and purchase behavior-based recommendations.
- Deployed the system on Alibaba Cloud and managed code versions via Git.

Research and Application of GPS Positioning and Sensor Technology in Epidemic Prevention ***2020.08-2021.04***

- Collected data, conducted research, identified shortcomings, and proposed improvements as the project leader.
- Completed system architecture, front-end, and back-end development.
- Authored project reports and produced one paper [5].

Certificates & Other Interests

Certificates: English (CET-4, CET-6)

Interests: Literature and History