

Tianxing Ji

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Education

MS	Brown University , Computer Science	Sept 2024 – Present
	• Coursework: Computer Graphics, Computer Vision, 2D Game Engines, etc.	
BEng	University of Liverpool , Computer Science and Electronic Engineering	Sept 2022 – May 2024
	• Coursework: Database Development, Artificial Intelligence, Communication Systems, Electronic Circuits and Systems, etc.	
BEng	Xi'an Jiaotong-Liverpool University , Digital Media Technology	Sept 2020 – May 2022
	• Coursework: Multi-variable Calculus, Java programming, Electronic Circuits, Data Structures, etc.	

Experience

Peer Assistant Leader in Campus , PAL Leader	Liverpool, UK
• Facilitated weekly study support sessions for first-year undergraduates, enhancing their understanding and study skills.	Oct 2023 – Dec 2023
• Coordinated with academic staff and program coordinators to align support sessions with educational objectives.	
• Promoted group study habits, improving communication, organization, teamwork, and leadership skills within the peer group.	
Luocheng Yirunfa Supermarket , IT Intern	Wuxi, China
• Supported and maintained the supermarket information system, improving system reliability through hardware installation, configuration, and maintenance; executed software installations, updates, and network troubleshooting.	June 2020 – Aug 2020
• Assisted in data collection, organization, cleaning, and analysis; utilized data tools to generate reports and provide actionable insights for business decision-making.	
• Delivered technical support and training to staff, resolving IT-related issues and improving operational efficiency through effective guidance on system usage.	
• Enhanced security by integrating AI recognition technology into the supermarket's security system, enabling automated alarm triggers and strengthening overall security measures.	

Publications

AI-Driven Student Performance Prediction and Analysis of Influencing Factors	Aug 2024
Jiajun Guo, Chenghang Liu, Tianxing Ji , Yuyao Li, Prof. Quan Zhang	
2024 International Conference on Higher Education Learning and Teaching (ICHELT)	
eCF Paper Id: 1571057814	

Projects

Farming Sim Game	2024
• Designed and implemented a farming simulation game with features such as crop management, resource gathering, and NPC interactions.	
• Focused on optimizing game mechanics to ensure smooth gameplay and user engagement.	

- Tools Used: Unity (C#).

Toon Tree

- Designed and implemented a real-time, animation-style tree visualization using a Toon Shader and L-system algorithm.
- Utilized advanced graphics techniques to simulate dynamic and visually appealing tree growth in real time.
- Integrated C++ with OpenGL for rendering and Qt Creator for user interface development.
- Tools Used: C++, OpenGL, Qt Creator.

github.com/TianxingJi/Toon-Tree 


2D Game Engines

2024

- Designed and implemented a custom 2D game engine in Java, incorporating features such as physics simulation, raycasting, and procedural generation.
- Developed core modules for collision detection, saving/loading mechanisms, and animation components.
- Integrated sound and data persistence to enhance gameplay experience.
- Tools Used: Java.

Desktop Navigation Robot with Edge Avoidance

- Developed a robot for autonomous navigation on a desktop, avoiding collisions with edges.
- Designed and implemented functionalities for navigation, obstacle avoidance, and edge detection.
- Enhanced performance through rigorous testing, debugging, and code optimization.
- Tools Used: Arduino (C/C++).

github.com/TianxingJi/Year-2-Project-UoL 

Technologies

Languages: C++, C#, Java, Python, SQL.

Technologies: OpenGL, Qt Creator, Unity, Visual Studio Code, XCode, Microsoft PowerPoint, Excel, Word, Overleaf, Arduino.