Guanhao Wang

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Computer science undergraduate focused on game development, environmental storytelling, and physical interaction.

EDUCATION

University of Wisconsin–Madison June 2025 to present
Computer Science Undergraduate · Expected graduation May 2027 · GPA 3.724/4.000

The Pennsylvania State University August 2023 to June 2025
Undergraduate Study in Computer Science · GPA 3.94/4.00 · Transferred to UW–Madison

GAMES AND INTERACTIVE PROJECTS

Coal Echoes ↗ 2026
Narrative Exploration Game · In development · Unity 6, HDRP, C#, Blender

- Designed a four-level first person exploration game about 1970s working class memories at an abandoned coal plant; built photography, album, scrapbook, and inspection systems for object discovery through the camera.
- Used an AI agent through Blender MCP to assist with parametric modeling and texture baking for industrial assets, including cableway structures and a guardhouse, then integrated them into Unity.
- Built terrain from USGS elevation data in MapMagic with an offline Gradient Terrain Authoring transition; created HDRP sandstorm, heat haze, and runtime newspaper halftone effects (halftone adapted from Daniel Ilett, MIT).

Vanishing Fireflies ↗ 2026
Interactive Light Installation · Completed · ESP32, Arduino, Unity, UDP

- Programmed 420 LEDs across three swarms, using radar and light sensors to translate visitor movement and human light sources into firefly disturbance and synchronization.
- Implemented two independently responsive zones, one ambient swarm, and a UDP interface for sending Unity synchronization commands during development and debugging.

Seafloor Revival ↗ July to August 2025
GMTK Game Jam 2025 · UI Development and Art Integration · Unity, C#

- Built all game UI and related C# behavior, integrated interface art in a six person team, and contributed to a released browser prototype of a 2.5D underwater building game.

Mooncake ↗ February to April 2025
Interactive Graphics · Three.js, JavaScript

- Built a Three.js mooncake scene for the Mid Autumn Festival with STL models, shadowed spotlighting, and drifting star particles; added live controls for light, camera orbit, and particles, documented in a technical report.

PROFESSIONAL EXPERIENCE

IQVIA ↗ July to August 2024
Technology Solutions Intern · Shanghai, China

- Wrote and maintained 100+ pages of user guides for a pharmaceutical WeChat Mini Program upgrade, covering two user types, four scenarios, and three device contexts.
- Performed user acceptance testing on the Mini Program and reported 10+ defects in Jira with reproduction steps; organized its 1,000+ data tags into a three level hierarchy for user filtering.

PUBLICATION

Human Computer Interaction in Indie Games ↗ 2023
Sole Author

- Analyzed implicit guidance, environmental storytelling, and player attachment in FAR Lone Sails; published in Lecture Notes in Education Psychology and Public Media, vol. 18, pp. 194 to 199.

SKILLS AND LANGUAGES

Games and interaction	Unity, C#, HDRP, uGUI, Shader Graph, Blender, ESP32, Arduino
Programming and tools	Python, Java, C, JavaScript, Three.js, Git, Jira
Languages	Mandarin native, English fluent, Japanese basic