junxuan.hu678@gmail.com
(+1)801-641-2602
Portfolio GitHub LinkedIn

Junxuan Hu

- Technical Designer
- Gameplay Programmer

Programming Languages

- C/C++
- C#
- Blueprints
- Python
- Java
- SQL

Software

- Unreal Engine 4/5
- Unity 2D/3D/VR
- Visual Studio
- Git/Perforce Source Control Tools
- Jira/Trello Management Tools

Education

Master of Entertainment Arts and Engineering: Engineering Track
University of Utah | Exp. May 2025

Bachelor of Science: Data Science
Duke Univeristy | 2023

Achievements

Fusion Symbiosis Exhibition: Serenity Citadel displayed as an interactive installation (Jiangsu, China, 2024)
First Prize: Chinese University Students Game Development Summer Camp (2022)
Honorable Mention: Mathematical Contest in Modeling (2021)

Technical Skills

- Gameplay Programming
- Image Processing
- Physics System Simulation
- Game AI Programming
- Data Analysis and Visualization
- Numerical Optimization
- Discrete Mathematics
- Stochastic Process Simulation

Soft Skills

- Leadership and management
- Fast self learning
- Teamwork and communication

Languages

- Madarin (Native)
- English (Proficient)

Work Experience

Tencent Games | Technical Designer Intern

Honor of Kings: World | Unreal Engine 4 | Blueprint, Python, C++
May 2024 -August 2024 | Shanghai, China

- Redesigned and implemented the logic for a core gameplay mechanic, incorporating inter-Blueprint communication, server-client synchronization, and server-side saving/loading, leading to classes decoupling, loading time improvement, and an 80% reduction in configuration overhead.
- Created Blueprint classes with Unreal Engine's network features, enabling them for online gaming.
- Designed and integrated a new interactive animation logic that combined walking and motion warping, easily configurable via data tables, resulting in smoother and more natural interactions.
- Created sublevels and transferred existing actors without data loss by Python, enhancing open-world loading performance.
- Crafted animations and camera movements by Sequencer, improving player interactive feedback.

Seasun Games | Intelligence Analytics Intern

May 2022 – August 2022 | Guangdong, China

- Collected and filtered data from social medias
- Constructed a database in HIVE to monitor the trend of game market
- Drafted 3 analysis reports with data visualization

Project Experience

Serenity Citadel | Chief Programmer, Producer

November 2023 – Present | University of Utah

Team size: 7 | Unreal Engine | Programming Language: Blueprint, C++

- Adapted as an interactive installation with alt control and displayed in Fusion Symbiosis Art Installation Exhibition in Nanjing, China.
- Using Unreal Utility, implemented a grid map spawner and random terrain generation based on Perlin Noise with easy designer access.
- Programmed level transition using level streaming and sublevels, realizing quick and consistent level loading.
- Realized character switching and controller action remapping using Enhanced Input System.
- Applied singleton design patterns with Unreal subsystems.

Planet X | Chief Programmer, Producer

2019-2023 | Duke Kunshan University Humanity Research Center

Team size: 10 | Unity Engine | Programming Language: C#

- Programmed the whole game loop including player actions, numerical systems, and UIs.
- Engineered game AIs based on behavior trees, simulating imperfect information decision making.
- Designed and implemented designer configuration method reading json.

The Post Oracle | Chief Programmer, Producer

2020-2023 | University Innovation and Entrepreneurship Initiative

Team size: 3 | Unity Engine | Programming Language: C#, Java

- Engineered a visual novel framework in both Java and Unity enabling designers to create dialogues, branches, and animations in natural languages, and keep track of the narrative branches in a datatable.
- Crafted the UI/UX in both design sense and programming sense.