Qinxin Ren

Jinniu District, Chengdu, Sichuan province, China

📱 +86 18190726257 | ✉ qinxin.ren18@gmail.com | 🏠 www.renqinxin.com | in linkedin.com/in/qinxin-ren-70b649206/

Education

Xi'an Jiaotong-Liverpool University (XJTLU); University of Liverpool   *Suzhou, China; Liverpool, UK*
BEng in Digital Media Technology   *Sept 2018 - July 2022*
- First-Class Honours Degree
- GPA: 3.79 (1/50)
- **Courses:** Principles of Computer Games Design, Final Year Project (Synthesis of Multi-Camera Video Datasets via Computer Graphics), Computer Graphics, Data structures, Advanced OO Programming, Human-Centric Computing, Linear Algebra, Calculus

Publication

- Q. Ren et al., A Decision-Making Model Using Machine Learning for Improving Dispatching Efficiency in Chengdu Shuangliu Airport, Complexity, 6626937.

Work Experience

Original Force, Ltd.   *Nanjing, China*
Technical Artist Intern (45h+/week)   *Feb 2022 - May 2022*
- Provided technical support for the development of the CG animation "A Record of a Mortal's Journey to Immortality" (1 billion + views).
- **Shader and Rendering:** Coded pipeline tools for the highlight of eyeball material; waterline effect with displaced waves, FFT ocean and shallow water simulation; physically-based simulation of mechanical effects in Niagara particle system and Blueprint.
- **Visual Effects:** Designed and implemented visual effects of smoke, and volumetric clouds in 3D Maya, houdini and EmberGen.
- **Tools:** UE4 & 5, blueprint, 3D Maya, Niagara, Houdini, EmberGen.

Epusu Software Co.   *Suzhou, China*
Unity Develop Intern (40h+/week)   *Sep 2021 - Dec 2021*
- Responsible for the interactive program development, testing and operation, and maintenance in Unity 3D.
- **Shader Graph:** Synthesize interactive particles moving based on the touch position in VFX particle system.
- **Tools:** Unity 3D, C#, VFX (visual effect graph)

Orientsoft Software Technology Co., Ltd.   *Chengdu, China*
Data Analysis Intern (40h+/week)   *Apr 2020 - Aug 2020*
- **Data Collection and Visualization:** Used Scrapy framework to crawl data, conducted sampling and processed the data via Jupyter Notebook, built support vector machine (SVM) classifier and visualized the data in matplotlib.
- **Tools:** Python, Scrapy, Matplotlib, SVM

Research Experience

Synthesis of Multi-Camera Video Datasets via Computer Graphics (FYP)   *Suzhou, China*
Researcher | XJTLU CG lab| Advisor: Ming Xu   *Jan 2021 - Now*
- **Best Performance in Final Year Project**
- **Modelling and Programming:** Modelled 3 virtual environments and 100+ pedestrian models to synthesize multi-view video datasets in Unity3D. Programmed and designed behavior patterns of pedestrian models in Unity 3D.
- **Verification:** Localized the pedestrians and verified the geometric relationships between multiple camera views via Mask_RCNN, Joint Occupancy Likelihood (JOL) and Repulsive Spatial Sparsity (RSS).

The Effect of Resolution in Distant Target Selection and Navigation Task in VR Games   *Suzhou, China*
Researcher | XJTLU x-CHI VR lab| Advisor: Haining Liang   *Jul 2022 - Now*
- **Modelling and Programming:** Modelled the First Person Shooting game scene and implemented the code of shooting and target selecting in Unity 3D.

Related Projects

2D Chinoiserie Two-Person-Game   *Suzhou, China*
Technical Artist | Game Designer   *Feb 2022 - May 2022*
- Applied GLSL and Shader Graph to conduct rendering, covering multiple level layouts and layered visuals; optimized the game design to enhance the player experience, covering mechanics, feedback, pacing and interface.
- Built an array of computer graphics features based on Unity, covering 2D scene composer, terrain editor, and various graphics features related to lightening and shadow, shaders and materials.

Doomsday Survival 3D Game   *Suzhou, China*

Individual Project   *Mar 2022 - Jun 2022*

- Utilized CharacterController to control monsters and player movement; used Navmeshagent to set the pathfinding system; build the scene and modify the rendering pipeline.

Optical Illusion 2.5D Game   *Suzhou, China*

Programmer | CG Designer | Game Designer   *Mar 2022 - Jun 2022*

- Modelled the scene in each stage; implemented Shader to realize 3D perspective effect; implemented the interactive animation in each stage.

Awards

2022	**Best Overall Academic Performance (1/50),** XJTLU	*China*
2022	**2021/22 Best Performance in Final Year Project (1/50),** XJTLU	*China*
2021	**University Academic Excellence Award (top 5%),** XJTLU	*China*
2019	**First Prize in Jiangsu Province (top 10%),** CUMCM (China Undergraduate Mathematical Contest in Modeling)	*China*
2019	**4th Prize,** XJTLU Innovation and Entrepreneurship Competition	*China*

Conferences

Invited guest   APEC Women Leadership Forum 2019

Invited guest   17th IEEE International Conference on integrated circuit (IC) Design and Technology

Skills

Programming   Unity, UE 4/5, Java, C/C++, C#, OpenGL, Python, PHP, HTML/CSS, JavaScript, SQL.

English   Professional proficiency (IELTS 7 (6.5) | GRE 322)

Chinese   Native proficiency

References available upon request.