

Haitao (Ricky) Lyu

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OBJECTIVE

Focused and detail-oriented software engineer. Diligent and dynamic video game developer, with vast experience in C++/C#/Unity3D/Unreal/ Self-motivated person, willing to exhaust my knowledge to achieve the company's targets.

EDUCATION BACKGROUND

University of Edinburgh (UOE)

Sep. 2021 - Aug. 2022

Major: Digital Media & Design

Expected Degree: Master of Science (08/2022)

Subject: Game Design Studio, Digital Public Playground, Design for Interactive Media

School Work:

- Built a Clothing-web-app based on React.js and Firebase. Utilized Google Firestore as database for maintaining user data and shopping data
- Developed a 3D Puzzle Game with Unity3D by utilizing Singleton and Observer Design Pattern in MVC framework, and saved and loaded data with JSON/Binary files for data safety
- Created variable Visual effects with shader language and shader graph in Unity universal pipeline and applied Post-Processing effect.
- Mastered computer graphics, reached a deeper understanding of graphics rendering pipelines and different lighting models
- Designed a Cyberpunk style Website with bootstrap for exhibiting the design work of Cyberpunk style currency

Shandong University of Science and Technology (SDUST)

Sep. 2017- Jun. 2021

Major: Digital Media Technology

Degree: Bachelor (06/2021)

Subject: Principles of Computer Composition, Data Structures, Computer Networks, Computer Graphics

School Work:

- Created a back-end Course management website based on HTML5, CSS, JavaScript, and MySQL 2020
- Built a Shopping website Front-end demo based on HTML5 CSS and jQuery 2019
- Developed an Android application with Android Studio, containing a register and login system and others 2019
- Designed an Aircraft war game with C++ based on MFC framework 2018
- Constructed a Graphic plotting system like CAD with C++ based on MFC framework 2018

Honors:

First-Class Scholarship, Three-in-One Combination, SDUST 2021

Chinese National First Prize, GameDev, China Digital Media and Creativity Competition for College Students, Nov. 2019

Chinese National Third Prize, GameDev, Chinese College Students Computer Design Competition, Jul. 2018

Third Price, "Blue Bridge Cup" Software and Information Technology Programming Competition (C++), Nov. 2018

TECHNICAL SKILLS

Programming: C, C++, C#, HTML5, CSS, JavaScript (React.js), Java, Python,

Database Management: MySQL, Firebase

Game Engine: Unreal, Unity3D (2D, 3D, FPS, RPG, Puzzle, mobile)

Network: Socket (TCP, UDP etc.), C/S

Source Control: Git (familiar with branch source control)

3D Modeling: MAYA, Blender, Adobe Subtains painter

Others: Adobe Photoshop, Adobe Premiere Pro, Adobe After Effects

PROJECT EXPERIENCE

3D RPG Puzzle game based on I-CHING culture (Semester final project)

2021

- Mastered design pattern (singleton, observable) to construct the code, resulting in inventory system, UI system, etc.
- Utilized event center, UI manager to build various game mechanisms (hook fly, shot water to pull out the fire, collect puzzle solve, etc.)

First-Person Shoot Game based on Ancient Story - The white stone canoe (Individual School Work)

2021

- Mastered inheritance, template, etc. for C# syntax to create multiple guns, Utilized Raycast system to detect enemy and generate particle effect
- Created C# script of enemy random spawns, and a State Machine for enemy patrol and navigation with the Navmesh system.
- Built models for scene construction with Maya and Blender, created materials with Photoshop and Sustains Painter

2D Mobile Puzzle game - 2048 (Individual School Work)

2021

- Designed the C# script logic of the 2048 mobile game: move and merge even Integers in a 2-dimension Matrix
- Utilized Itween for 2D icon animation, and tested build work both on pc and iOS mobile

Clothing Attribute Prediction with Auto-Encoding Transformations

2020

- Carried out an in-depth study of the history of computer vision and pattern recognition, and the application of artificial intelligence, reading multiple relevant patents in English
- Utilized the Method including SGD algorithm, CNN (Alexnet, VGG-16, etc.), MSEloss, and Auto encoding transformation to train the experimental data.
- Contribute to writing the English patent and completing the patent application as assistant

“Mao Li” Blog App - Android mobile software

2019

- Mastered Android software development, the usage of various layouts and controls,
- Created registration and login system, user personal information system, blog system
- Utilized LitePal and SQLite for the mobile database to manage user data and blog data

Chinese College Students Computer Design Competition - Parkour Game Design “Running Panda”

2018

- Created C# script for parkour map cycle generate and obstacle random spawn
- Built the panda model with Maya and made a parkour animation
- Designed UI elements with Photoshop

TEAMWORK

Volunteer, Wildlife Rescue Program (online), Non-Governmental Organizations

2020

- Communicated with the Singapore Animal Protection and Education Association staff about the status of animal protection and the illegal trade in wildlife.
- Planned an online activity related to the theme of animal protection for group activities to improve the status quo of animal protection based on the content of the meeting.
- Wrote an essay with the theme of wildlife protection to raise public awareness of animal protection.

Administrator, Digital Media Studio, SDUST

2019 – 2020

- Took charge of the maintenance and lending of school photographic equipment, as well as the on-duty of the studio.
- Assisted the studio teacher to compile software design instructions and other software copyright application materials, and modified part of the front-end code of the web page

Organizer & President, Photography Club, SDUST

2018 – 2020

- Established the campus photography club, organized school photography competitions and photo-shooting tours, and conducted post-photography training.

Officer, School TV Station, Publicity Department, SDUST

2017 – 2018

- Assisted teachers to shoot school meeting videos and school promotional videos.
- Coordinated the work with other associations of the department.