YUCHEN XIE

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EDUCATION

Graduate : Carnegie Mellon University   Pittsburgh, PA   08/2021-05/2023 (Expected)
Major: Master of Computer Graphics, Entertainment Technology Center
Relevant Courses: Principles of Software Construction; Introduction to Computer Systems;

Undergraduate : ShanghaiTech University   Shanghai, China   09/2016-06/2020
Major: B.S. in Computer Science; Minor: Innovation and Entrepreneurship;
Relevant Courses: Algorithms; Software Engineering; Data Structures; Introduction to Algorithm Game Theory; Computer Architecture; Operating System;

INTERNSHIPS

FreeRange Games (Unreal 4, C++)   06/2022-08/2022
Intern, Gameplay engineer for The Lord of the Rings: Return to Moria
➢ Worked on the survival game loop and created the sleep ability of characters.
➢ Implemented the transition logic between different sleep montage states and synchronized the action of character as well as UI notifications around the multi-user network using RPC.
➢ Hooked other survival related system into sleep event, implemented effects in different systems of time lapse during sleep using delegates and callback functions.
➢ Developed tunable numerical system for designers to test and adjust.

Netease Interactive Entertainment (Unreal 4, C++ / Python)   06/2020-08/2020
Intern, Software development engineer
➢ Worked as an infrastructural engine engineer to provide technical support for game designers.
➢ Implemented the workflow between UE4 and self-developed NeoX Engine, customized UE4 engine for the transformation of animation sequence as well as animation files between the two engines.

PROJECTS

MicroBittle (Unity WebGL, C#/JavaScript/Html/Python), *Lead Programmer*   09/2022 - Present
➢ Programed serial communication among Micro:bit, JavaScript front-end and Unity using Web Serial and JS plugin.
➢ Built a grid-base maze system that generated serializable maze data when placing tiles, allowing designers to rapidly create levels by simplifying level build techniques.
➢ Designed an object-oriented obstacle system that can be easily extended for different obstacles, character reactions towards different obstacles and how the obstacles can be destroyed.

Snob Bog (iOS AR app with Unity, C#), *Programmer/Co-producer*   01/2022 - 05/2022
➢ Extended upon an AR project that reveals animated experiences triggered by neighborhood objects, optimized the performance by switching the object detection method to Yolov3-tiny and achieved better accuracy and shorter detection time.
➢ Developed a character customization system as a proof of concept that the system can handle user customized content in the future.
➢ Designed, prototyped and iterated several versions of a prompt system to better educate naïve users.
➢ Established detailed and intelligible technical documentations, reviewed and recorded debugging problem logs for future developers to work on our project.

Santorini (Local Web Application, Java/TypeScript/Html)   10/2022 - 10/2022
➢ Implemented back-end rules of board game Santorini with Java, GUI of the game board using React.js and http calls between back-end and front-end using Nanohttpd.

PROFESSIONAL SKILLS

Programming language: C#, C++, C, Python, Java, Javascript/Typescript, Html
Platforms: WebGL, Unity, Unreal4, Oculus Quest2, MRTK, Hololens2, Tobii Eye Tracker, HTC Vive
Version Control and Collaboration: Perforce, Git, SVN, Google Drive, Jira, Slack