

# Shiyong Chen

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## Work Experience

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### Universal Creative

June 2023 - Aug 2023

Technical Intern, Advanced Technology Interactive

Orlando, Florida

- Designed and researched on possible technical approaches for undisclosed major projects.
- Constructed mockups and interactive applications using **Unreal and Unity** for immersive experiences within major projects, actively contributing to playtest sessions.
- Conducted research and in-depth analysis, contributing to the advancement of various technologies.

### Funplus

Sep 2019 - May 2022

Game Designer

Beijing, China

Designed and implemented game design, data tracking and art asset management tools to facilitate game development for various mobile games:

#### Dream Detective (Mobile Casual Game | [Game Link](#))

Nov 2021 - May 2022

- Led the design of game levels and systems, overseeing the transition from **initial concept to version 1**, employing Unity and C#.
- Designed and implemented game design tools to streamline the game design pipeline.
- Implemented a comprehensive game data tracking system and conducted in-depth analysis of in-game data using ThinkingData and **SQL**.

#### Family Farm Seaside (Mobile Simulation Game | [Game Link](#))

Sep 2019 - May 2022

- Designed and implemented in-game events and features to enhance the overall gaming experience, leveraging Microsoft Office and Cocos2D.
- Enhanced the **art asset management tool** to facilitate seamless adaptation of original assets to engine requirements, resulting in increased operational efficiency.
- Developed a game math model calculation tool using a combination of **spreadsheets, JavaScript, and Python** to enhance the efficiency of game numerical design and optimize the economic systems within online games.

## Education

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### Carnegie Mellon University

Aug 2022 - May 2024 (Expected)

Master of Entertainment Technology (Computer Science)

### Hong Kong Baptist University

Aug 2015 - Aug 2019

Bachelor of Communication (Media Arts Concentration), Minor in Computer Science

## Academic Projects

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### Ace Breaker (Multiplayer Virtual Reality Pickleball Game | C# | [Web Link](#))

Jan 2023 - May 2023

Lead Programmer/ Technical Designer - Carnegie Mellon University

Pittsburgh, PA

- Developed a multiplayer virtual reality pickleball game using Unity and C#.
- Used **Oculus** to set up **VR** game environments and implement features such as Avatar sync and motion sync.
- Built multiplayer online framework and synchronized data using **Photon cloud server**.
- Established a collaborative workflow using **Git, Perforce, and Google Suite**.

### Scotty 3D (3D Graphics Software | CMU15-462/662 Course Project | C++ | [Web Link](#))

Jan 2023 - May 2023

- Accomplished a 3D graphics software pipeline including modeling, rendering, and animating components.
- Constructed scene meshes using a Bounding Volume Hierarchy (BVH) to achieve efficient and robust query and accelerated the rendering process by hundreds of times.
- Implemented high-quality global illumination based on Monte Carlo path tracing, and applied importance sampling to improve both performance and image quality.

## Skills

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- Programming Languages: C++ / C# / Python / SQL
- Software: Unity / Unreal Engine / Visual Studio / VS Code / Maya
- Version Control Tools: Git / Perforce
- Design Software: Axure / Premiere / AfterEffect / Photoshop / Illustrator
- Hardware: Oculus Quest (VR) / HTC Vive (VR) / Tobii Eye Tracker / HTC Vive Tracker