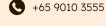
Ying Xiang Seah

Full-Stack Developer/Mixed Reality Developer Computer Science and Design Undergraduate @ Singapore University of Technology and Design



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Unity/MRTK (C#)

Android Studio

• Flask (Python)

Work Experience

Mixed Reality Developer • HelloHolo • Singapore

Full-time • Feb 2024 - Aug 2024 • 6 mo

• Spearheaded the development of an internal UI Toolkit in Unity to streamline XR workflows, replacing the unsupported MRTK. Advanced Unity editor scripting and created comprehensive API documentation using DocFX.

• Served as a trainer for DSTA BrainHack XRperience 2024 for over 120 participants, creating and delivering Unity and C# instructional materials for cross-platform XR content creation. Demonstrated Apple Vision Pro's capabilities and provided development support, managing the application showcase and XR experience booths.

- **University Studies**
- Part-time Oct 2021 Oct 2022 1 yr

• Experience in teaching as an assistant trainer for immersive media courses with over 150 students for several major local education institutions.

- Built a digital twinning experience for National University of Singapore's 5G Lab exhibition.
- Enter University Singapore University of Technology and Design
- Full-time Oct 2020 Oct 2021 1 yr
- Delivered multiple MR-based training simulators on HoloLens 2 for various prominent global corporations for their internal employee training initiatives.
- Worked with Microsoft Egypt to deliver an interactive data visualization app that displays dynamic real-time IOT data on construction analytics for a prominent national project.
- Assisted as a technical consultant for a renowned local technological university for their student research project, mr4dfma2, which explores the use of digital twinning in MR to aid engineers in testing and evaluating mechanical designs and assemblies from CAD software.

Projects

SUTDHotelBooking - Hotel booking site case study

• Led a team of 6 through the process of client interaction, milestone setting, and determining project parameters for a frontend-focused full-stack web application development.

• Headed frontend/backend development using the T3 stack - NextJS, React, TailwindCSS, NextAuth, Prisma, Typescript, and MySQL.

- Used Figma for rapid prototyping and mocking of the site.
- Implemented testing structures (unit/integration/E2E) using Jest and Cypress.

• Delivered a functioning site with user authentication, login system, API fetching, and full hotel searching capabilities with fuzzy searching.

FPGA Arcade Game and ALU design

• Designed a working 16-bit ALU and CPU following MIT's Beta CPU ISA using Lucid HDL, deployed on the Xilinx Artix-7 FPGA.

• Wrote a graphics driver for our custom CPU design to display graphics on an RBG LED matrix.

• Prototyped game code in C and hand-transpiled C code to the Beta assembly language to run on our CPU implementation on the FPGA.

Hobbies & Interests

- Portrait and Travel Photography
- 3D modelling and rendering with Blender and Unreal Engine 5
- VR gaming and game development
- Thrill-seeker rollercoaster rides and adventure activities
- Avid manga reader

Skills

• Java

Full Professional Proficiency

- Python
- Javascript/

NextJS

- Typescript
- HTML/CSS
- Figma React

• Git

• I aTex

Decent Proficiency

- Lua
- C++ • Flutter (Dart)
- Davinci Resolve MvSQL
- Blender (3D modelling/rendering)
- FPGA Programming (Lucid HDL)

In Progress

- Unreal Engine 5 MongoDB
- React Native
- Blender (texturing, rigging)

Related Coursework

- Computational Structures
- Computer System Engineering
- Algorithms
- Information Systems
- Elements of Software Construction
- Machine Learning
- Design Thinking Projects

Education

Bachelor of Engineering in **Computer Science and Design**

Singapore University of Technology and Design 2021-2025 • CGPA 4.50

Executive member of Cycling Interest Group

- Organized and hosted weekly biking activities
- Managed club finances

Member of the SUTD XRCommunity

• Organized club meetings and presented topics on current events in XR (Extended Reality)