Yanxin Peng

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# EDUCATION

**University of Southern California**, Bachelor of Science | Los Angeles, CA ***Expected Graduation in May 2026***

* ***Major*** in Computer Science and ***Minor*** in Music Production & Artificial Intelligence (GPA: 3.67/4.00)
* ***Core Courses:*** Video Game Programming, Game Engine Programming, Algorithms and the Theory of Computing, Software Engineering, IOS App Development

# WORK & PROJECT EXPERIENCE

**Portal** | University of Southern California ***January 2023 – Present***

## Game Development

* Covered and re-implemented the 3D classic game of Portal by Valve.
* Applied the concept of linear algebra of matrix transformation for 3D graphics, and quaternion
* Seamlessly integrated Google Places, SendBird, and OpenWeather APIs to enrich app functionality, offering users comprehensive court information, weather updates, and a dynamic communication platform.
* Expertly crafted a user-friendly interface using UIKit and Autolayout, enhancing user experience in account management, in-app messaging, and interactive map navigation.
* Engineered a robust and secure NoSQL Firebase database for user authentication and data storage, ensuring high performance and data integrity.

**BasketBLE** | University of Southern California ***January 2023 – Present***

## IOS Developer

* Pioneered the development of BasketBLE, an innovative iOS application designed to track real-time availability of basketball courts, enabling players to find and join games effortlessly.
* Seamlessly integrated Google Places, SendBird, and OpenWeather APIs to enrich app functionality, offering users comprehensive court information, weather updates, and a dynamic communication platform.
* Expertly crafted a user-friendly interface using UIKit and Autolayout, enhancing user experience in account management, in-app messaging, and interactive map navigation.
* Engineered a robust and secure NoSQL Firebase database for user authentication and data storage, ensuring high performance and data integrity.

**HousingPedia** |University of Southern California ***August 2023 – Present*** **Co-Founder and Full-Stack Developer**

* Co-founded and spearheaded the development of HousingPedia, a web application designed to streamline the process of finding university-affiliated housing, with a special focus on short-term leases for students during internships and summer sessions.
* Utilized Vue.js to architect and implement the front-end, delivering a responsive and intuitive user interface.
* Implemented a Firebase-based NoSQL database to facilitate secure user registration, login, and housing data storage.
* Drove the entire project lifecycle from concept to deployment, ensuring a seamless user experience and efficient backend functionality.

**JoseTable 2.0** | University of Southern California ***Sep 2022 – Dec 2023***

## Software Developer

* Contributed to the development of JoseTable 2.0, an advanced restaurant management application, by integrating Yelp API for comprehensive restaurant data retrieval.
* Implemented Java Servlets for efficient backend data processing and management.
* Developed concurrent programming algorithms to simulate real-time driver dispatch and order delivery systems.
* Constructed a SQL database to support essential functionalities including user registration, favorites, and reservation services.
* Enhanced front-end user experience by applying HTML5, CSS, and AJAX, facilitating dynamic interaction between the user interface and backend systems.

**Next-Gen Learning**| University of Southern California, SpatialSC ***Sep 2022 – Dec 2023***

## VisionOS Software Development, Hackathon

* Participated in the development of VisionOS for the Next-Gen Learning project during a SpatialSC hackathon.
* Utilized Luma Generative AI API to create real-time 3D models from videos, enhancing the learning experience for users.
* Implemented AR features using Reality Kit in Xcode 15.0 Beta, combined with the Vision Pro simulator, to develop immersive educational content.
* Collaborated in a fast-paced, innovative environment, contributing to the cutting edge of educational technology.

# LEADERSHIP EXPERIENCE

**SpatialSC XR Club** | Senior Member ***September 2021 – Present***

* Spearheaded the development of an interactive XR (Extended Reality) project utilizing Unity and Maya, focusing on creating immersive educational experiences.
* Collaborated with a team of developers and designers to ideate, design, and implement XR solutions for campus-wide events.
* Conducted workshops and presentations on XR technologies, sharing knowledge and best practices with club members.

# SKILL & INTERESTS

* ***Technical Skills:*** C++, Swift, Firebase, SQL, HTML5, Maya, Unity, JavaScript
* ***Language***: English (Fluent), Chinese Mandarin(Fluent)
* ***Interests:*** Work out, Guitar, Piano