

JOSHUA NEE

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EDUCATION

National University of Singapore, BEng (Computer Engineering)

Aug 2021 - Present

- Expected Graduation: July 2025

WORK EXPERIENCE

Solutions16, Software Engineering Intern

Sep 2022 - Present

- Streamlined 2 IoT device repositories into the company's common C++ library package for ease of operational flow, halving the source lines of code needed to debug each device
- Implemented Blynk IoT platform automation features to support automatic email notifications for a company, eliminating the need for 8-hourly manual updates

National University of Singapore, Teaching Assistant

Aug 2022 - Present

- Designed class materials and conducted tutorial and lab sessions for 27 students in the [Data Structures and Algorithms module](#) during the current semester
- Hosted weekly consultation sessions for all 207 students taking the module

PROJECTS & HACKATHONS

Telegram Bot - Study Buddy

May 2022 - Present

- Directed the development of a Telegram Bot aimed at connecting students to form study groups
- Deployed to 80 Engineering students in our pilot program, with 29 current active users
- Conceptualized expansion plans targeting NUS College of Design and Engineering in 2023
- Built in Python with MongoDB for backend and Heroku for deployment

Game Development - [Orbital](#) (Apollo 11 / Advanced)

May 2022 - Aug 2022

A self-directed Independent Software Development Project with structured peer evaluation, critique and presentation milestones, for students to pick up software development skills on their own

- Programmed a single-player precision platformer game, using sprites and art style adapted from classic games, with around 1 hour of playtime
- Built in C# using the Unity game engine

Augmented Reality - [Future Interfaces With Smart-Glasses](#)

May 2022 - May 2022

- Formulated use cases for AR smart glasses to guide users through shopping malls
- Prototyped using Wizard of Oz methodology via an Android application on the Nreal Light AR glasses during the 48-hour hackathon
- Built in C# using the Unity game engine with Microsoft Mixed Reality Toolkit

Blockchain - [Singapore Blockchain Innovation Challenge](#)

Dec 2021 - Dec 2021

- Won 3rd Place in the Enthusiast Track of the hackathon as a team of 4
- Developed a web app using ReactJS, focused on interoperability between a health blockchain and insurance blockchain to build an instant-payout solution from viewpoint of an insurance company
- Utilized the Affinidi platform to verify health certificates and extended project's scope with ZKSync Layer-2 platform to minimize gas fees

SKILLSETS

- Languages: English, Chinese
- Technical: Computer-Aided Design, Microsoft Office Suite (Word, PowerPoint, and Excel), MATLAB
- Programming: Arduino, Android Studio, C, C++, C#, CSS, GPIO Programming, HTML, JavaScript, Lua, MongoDB, Python, Raspberry Pi, React, SQLite, Unity