JOSHUA NEE

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EDUCATION

National University of Singapore, *BEng (Computer Engineering)*   **Aug 2021 - Present**
- Expected Date of Graduation: July 2025, Cumulative Average Point: 4.82 / 5.0
- Course Work: Programming Methodology (A+), Data Structures and Algorithms (A), Introduction to Artificial Intelligence (A+), Software Engineering & OOP (A-)
- NUS Overseas Colleges (NOC) New York, Batch 19

Relevant Skills: C++, Java, Python, Typescript, React, PostgreSQL, MongoDB, AWS Serverless Architecture

WORK EXPERIENCE

InTune Auto, *Software Engineer* (New York)   **Dec 2022 – Dec 2023**
- Engineered 9 major projects encompassing digital authorization, share via Twilio SMS and Gmail, Carfax integration, OpenAI utilization, EC2 image attachments, CapitalOS Fintech collaboration, automated vehicle reminders, appointment scheduling, and identity verification.
- Implemented comprehensive testing strategies, utilizing Cypress for frontend tests and backend integration tests, while also focusing on data pagination and component modularity to enhance system maintainability.
- Leveraged a diverse technology stack including Heroku, Netlify, DataDog, AWS ECR and ECS, and Docker, while coding in TypeScript, React, Jersey, jOOQ, and PostgreSQL to build and deploy scalable, reliable solutions.

Solutions16, *Software Engineer* (Singapore)   **Sep 2022 – Jan 2023**
- Developed an end-to-end monitoring system using MosquittoMQTT, DigitalOcean, LilyGO SIM7600, and ESP32, integrating it with Blynk and MongoDB to collect over 200,000 data points.
- Established just-in-time alerts for Whatsapp and Telegram using Meta for Developers and BotFather respectively, successfully preventing 2 instances of severe property damage due to pump room leaks.
- Automated email notifications through Blynk IoT platform, eliminating the need for manual 8-hour updates.

National University of Singapore, *Teaching Assistant* (Singapore)   **Aug 2022 – Aug 2023**
- Designed class materials and conducted tutorial and lab sessions for 27 students in the Data Structures and Algorithms module during the current semester
- Mentored 12 student teams in self-directed software development projects, focusing on Unity game development and Telegram bot creation. Achieved significant team success with 10 teams attaining Apollo 11 (Advanced) level and 2 teams reaching Gemini (Intermediate) level.

PROJECTS & HACKATHONS

Blockchain - ArcAid   **Sep 2023 – Sep 2023**
- Secured the Best Education Hack award at PennApps XXIV hosted by University of Pennsylvania, ranking among the top 8 teams out of 354 participants.
- Developed ArcAid to streamline the student aid application process using Aleo's zk-SNARKs. Implemented 2FA with USB and SHA256 encryption, built using Next.js and managed the database with Prisma ORM and PlanetScale.

Artificial Intelligence - TravelGPT   **Apr 2023 – Apr 2023**
- Won 1st Place Best Solo Hack in HawkHack 2023 organized by Montclair State University.
- Built customizable travel itineraries using the ChatGPT AI model and integrated the MapBox API for an interactive map feature.

Telegram Bot - Study Buddy   **May 2022 – Dec 2022**
- Led the development of a Telegram Bot designed to connect students for study groups, built in Python with MongoDB for backend and deployed on Heroku.
- Successfully deployed the bot to 80 Engineering students in a pilot program, with 29 formerly active users.

Game Development - Orbital (Apollo 11 / Advanced)   **May 2022 - Aug 2022**
- Programmed a self-directed single-player precision platformer game, utilizing sprites and art style adapted from classic games.
- Invested over 400 hours to build the game in C# using the Unity game engine.