

# Matthew Gani

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## Education

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### National University of Singapore

*Bachelor of Engineering (Computer Engineering)*

August 2019 – May 2023

- GPA/CAP: 4.72/5.00, Deans' List (AY21/22 Semester 2)

**Relevant Coursework** *Data Structures and Algorithms, Software Engineering and Object-Oriented Programming, Computer Architecture, Database Systems, Information Security, Computer Networks*

## Work Experience

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### Teaching Assistant for Computer Engineering Capstone Project

August 2022 – Present

*National University of Singapore, School of Computing*

- Mentored and evaluated 3 groups of 5 students to build an Augmented Reality Laser Tag System
- Collaborated with Professors for module guidelines and evaluation criteria, in charge of External Communications

### Software Engineer Intern

May 2021 – November 2021

*Autodesk*

- Utilized AWS tools to migrate data from Oracle Database to AWS RDS Database
- Identified and wrote technical documentation for changes to replace enterprise application with AWS cloud system
- Built a Spring Boot Microservice which listens to AWS Kinesis stream and pushes events to AWS SQS
- Enhanced communication skills through Agile Methodology during Scrum meetings

## Projects

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### StayTuned | [Link](#) | *React, NodeJS, MongoDB, Express, Jest, Cypress, JWT, ESLint, Chakra UI*

- Created a social music information based web application using Spotify and other music data API
- Developed a NodeJS and Express based backend connected to MongoDB to access user information
- Applied token based authentication using JWT to let users make, edit and delete comments on songs
- Performed E2E testing using Cypress and unit testing using Jest

### Augmented Reality Laser Tag System | [Achieved Top Student](#) | *Python, Socket.IO, TCP Sockets, MQTT*

- Designed a 2-player AR laser tag system in a team of 5, specializing in External Communications
- Implemented real-time communication between a server on an Ultra96 FPGA and laptop/phone clients with secure AES communication and SSH tunnelling
- Employed Socket.IO, TCP Sockets and MQTT for communication between system components

### Scheduler– | [Contribution](#) | *Java, JUnit, Regular Expression*

- Engineered a CLI based scheduling application in a team of 5, implemented extracting of events from text
- Exercised revision control, different types of testing, UML, technical documentation and debugging
- Strengthened communication and problem-solving skills by facilitating team discussions

## Technical Skills

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**Programming Languages:** Python, Java, SQL, C, C++, JavaScript, HTML, CSS, Assembly (ARM, RISC-V), Verilog

**Frameworks/SDKs:** React, NodeJS, Express, Jest, JUnit, Cypress, Spring Boot

**Database:** PostgreSQL, MongoDB, Firebase

**Developer Tools:** Git, Github, VS Code, IntelliJ, Docker, Postman, Heroku, SQLDeveloper, MySQL Workbench

**Certifications:** [Full Stack Open 2022](#), [NUS Orbital \(Apollo\)](#)

## Extra-Curricula Experience

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### Marketing Head

August 2020 – May 2021

*National University of Singapore, Electrical and Computer Engineering Club*

- Managed a group of 5 members to organize the sourcing of Industrial Visits and sponsors for welfare packs
- Collaborated with other parts of the ECE Club to promote sponsors

## Others

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**Languages:** English (first language), Mandarin