

ALEXANDER LISWANDY

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EDUCATION

Nanyang Technological University, Singapore Aug 2023 Matriculation
Bachelor of Engineering in Computer Science with a Second Major in Business
Dunman High School, Singapore 2015 to 2020

- GCE A-Level H2 Computing, Mathematics and Physics Distinction
- Top in school level for H2 Computing in 2019
- Awardee of Edusave Certificate of Academic Achievement 2020 and Edusave Award for Achievement, Good Leadership and Service (EAGLES) 2020

ACADEMIC PROJECTS AND ACHIEVEMENTS

BuildingBloCS, Singapore Nov 2019 to May 2020
Games Organising Committee Lead

- Singapore's **largest outreach programme** for students, by students, aimed at promoting more exposure to Computing and Computer Science as a whole for Secondary School, JC and IP students, supported by various partners like Ministry of Education and Google.
- Spearheaded a team of JC Computing students from all across Singapore in developing **The Amazing Race**, a **Flask** and **JavaScript** based web application game entirely from scratch that introduces basic core programming concepts to participants. Designed the **front-end UI** using **HTML**, **CSS** and **JavaScript** and handled the back-end processing using **Python** and **JavaScript**.
- **Collaborated** with other committee leads to host its largest annual Computing and Computer Science outreach conference with over **200** student attendees across Singapore.
- Generated and **adapted** game ideas meant for a live conference into digital form due to the COVID-19 situation.

Link(s): <https://github.com/Airiinnn/amazing-race>

FOSSASIA Summit Mar 2020
Web Development with Flask Workshop Instructor

- **Independently** prepared and conducted a workshop about getting started with **web development** using the **Flask** framework together with **Jinja**, **HTML** and **CSS** at Asia's premier developer event exhibition and conference, supported by partners such as Lifelong Learning Institute, Google and Facebook.
- Leveraged proficiency in the **Flask** framework gained through previous school based projects and external hackathons like developing Dunman App in collaboration with the Student Council which was designed to streamline announcements and information flow from school staff to students.
- Attended by over **70** participants combined across the live event and live stream.

Link(s): <https://github.com/Airiinnn/flaskworkshop2020>

National Olympiad in Informatics, Singapore Apr 2020
Bronze Award

- Completed over **100** competitive programming problem sets in **C++** on HackerRank's ProjectEuler+ and **dunjude.me** to prepare for the competition.
- Participated in multiple other competitive programming competitions like Google Kick Start and Code Jam to further deepen my knowledge in **algorithms** and **data structures** and proficiency in **C++**.

WORK EXPERIENCE

NM Dev 2021
Content Writer Intern

- Contributed to the creation of the **Introduction to Data Science** course for NM Dev, a high performance, object-oriented programming library of mathematics, by writing the **Basic Statistics** chapter. Mentored by co-founder of NM LTD and Fudan and Ex-National University of Singapore Professor, Dr Haksun Li.
- Explained and simplified basic statistical concept, aimed at High School students (and their equivalents).
- Related the NM Dev library functions to their corresponding statistical concepts through sample code in Kotlin.

Link(s): <https://nm.education/courses/introduction-to-data-science/lessons/basic-statistics/>

PERSONAL PROJECTS

Project Navex 2022 to Present
Navigational Data Sheet (NDS) Generator Web Application

- Developed a **JavaScript** based web application entirely from scratch using **HTML**, **CSS**, **Google Maps API** and **EPSC API** to tackle a problem identified during my time in National Service.
- Automates tedious and repetitive tasks during NDS creation, reducing the time required to create one by up to **75%**.
- Extended the usage of the tool to all other NSFs through advertising, garnering a peak of over **500 uses per day**.

Link(s): <https://projectnavex.com/> | <https://github.com/projectnavex/project-navex>

SKILLS

Programming Languages and Frameworks

C++, Python, Flask, JavaScript, HTML, CSS

Database Management

MySQL, SQLite, MongoDB

Miscellaneous

Git, Google Maps API, Raspberry Pi, Soldering, PC Building

OTHER INTERESTS

Puzzle Games

PC and Keyboard Building

Running & Cycling