

# ALEXANDER LISWANDY

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## EXECUTIVE SUMMARY

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Detail-oriented and self-driven Computer Science student with 4 years of experience in developing websites and web applications. Developed applications and contributed to numerous projects that have benefited hundreds of users, both independently and as part of a team. My technical proficiencies include Python, Flask, JavaScript, HTML and CSS, with experience in React, C++, SQL and MongoDB. Additionally, skilled in PC and keyboard building and soldering. I have a keen attention to detail and a drive to continually enhance and expand my programming skillset and stay up to date with popular industry-standard frameworks.

## EDUCATION

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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

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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**, **MySQL** 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 **dunjudge.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

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NM Dev 2021  
Technical 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

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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>

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2023 to Present

#### Personal Programming Portfolio Website

- Designed and developed a programming portfolio for myself using **React**.
- Paid special attention to **UIUX** considerations while designing the website.
- Ensured website is compatible on common devices through the use of a **responsive web design**.

Link(s): <https://alex.lis.fyi/> | <https://github.com/Airiinnn/lis>

#### PC Building Experience

2021 to Present

##### Technical Experience with PCs

- Built **2** PCs from scratch without issues. Picked out, sourced and assembled the PCs **independently**.
- Experience in **troubleshooting** PC hardware issues, through **methodical** checks and tests.
- Assisted multiple friends with choosing PC parts that suit their individual needs and budgets.

#### SKILLS

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##### Programming Languages and Frameworks

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

##### Database Management

MySQL, SQLite, MongoDB

##### Miscellaneous

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

#### OTHER INTERESTS

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Puzzle Games

PC and Keyboard Building

Running & Cycling