

# ARUL KUMARAN

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## EDUCATION

### National University of Singapore

Singapore

*Bachelor's in Computer Science, Minor in Quantitative Finance*

*Expected Graduation: 2027*

- Incoming coursework: Object-Oriented Programming, Data Structures and Algorithms, Web Programming and Applications, Design and Analysis of Algorithms, Discrete Structures.

### Raffles Institution

Singapore

*GCE 'A' Levels*

*Feb 2020 - Dec 2021*

- Emerged Champion in the Singapore Inter-polytechnic Capture-The-Flag competition, a national-level competition with close to 100 participants. Won top 5 placings in other national-level CTF competitions.

## EXPERIENCE

### GovTech Singapore – Software Engineer Intern

Apr 2024 - Aug 2024

*Attached to TechPass, an IAM & SSO solution (powered by Microsoft Entra ID) for government services.*

*Singapore*

- Spearheaded automation of bulk creation of test and project accounts, leading to up to 75% reduction in support tickets from different government agencies to create such accounts manually.
- Implemented frontend UI for listing and creation of accounts, including various search features like highlighting and pagination.
- Enhanced the functionality of the Golang-based IAM microservice, developing a robust method for creating and assigning privileges to test and project accounts using Microsoft Graph API.

### NodeFlair – Software Engineer Intern

Nov 2023 - Apr 2024

*NodeFlair is a Series A Startup that offers AI-powered tools for job seekers to streamline the job-seeking process*

*Singapore*

- Extended existing API on the Ruby on Rails backend to accommodate new features, enhancing site capabilities.
- Enhanced features of a browser extension that autofills job applications using TypeScript, React, and Plasmo, by adding new menus and expanding support for more ATS, like Ashby and Lever.
- Spearheaded localization support for a multi-language website, expanding the customer base by 20% in international markets.
- Implemented analytics tracking and A/B testing to optimise user experience, resulting in a 20% increase in click-through rate.
- Enhanced capabilities of AI-powered resume builder, including adding features to enhance job descriptions using AI.

### Defence, Science and Technology Agency (DSTA) – Research Intern

Nov 2020 - Dec 2020

*DSTA manages defense technology and acquisitions in Singapore.*

*Singapore*

- Developed an application using Flask, Python Imaging Library, and PyTesseract to automate the extraction of text from invoices and organize it in a structured manner, resulting in improved efficiency and accuracy in invoice tracking and management.
- Extensively researched and made a report on how DSTA could make use of Internet-of-Things technologies for various use cases, such as management of SAF's assets, like weapons and aircraft fleet.

## PROJECTS

### Learny LMS | Node.js, Next.js, PostgreSQL, Express

- Developed and launched a comprehensive Learning Management System (LMS) for freelance online tutors, offering a streamlined solution for managing course materials and tracking student assignments, resulting in improved efficiency and productivity. 20+ tutors are actively using this platform and the user base is currently expanding.
- Implemented features like a role-based user system, individual file permissions, easy organisation of content, assignment submissions tracking and Zoom Cloud Recordings API Integration.

### Minutes | FastAPI, Next.js

- Developed an intelligent note editor for NUS Hack&Roll 2024 and won "Top 8 Hacks" Prize.
- Implemented features: WYSIWYG editor for notes, AI-generated quizzes based on notes' content, AI-based note inquiries.

### Safety Form App | Node.js, React.js, MongoDB, Express

- Developed a user-friendly web application for construction workers and safety supervisors, enabling them to complete safety declaration checks digitally. Implemented functionality to generate downloadable PDF versions of completed declarations, enhancing convenience and efficiency for users.

### Forum-App | GraphQL, Node.js, React Native, MongoDB

- Implemented a full-stack CRUD forum application, with features like post creation, post voting, comment system, robust user authentication and security using JWT, and markdown editing.

## TECHNICAL SKILLS

**Languages:** JavaScript, Python, Golang, Ruby, HTML/CSS, C

**Technologies/Frameworks:** React.js, React Native, Node.js, GraphQL, Ruby on Rails, Django, Flask, Material-UI, TailwindCSS, Docker

**Developer Tools:** Git, VS Code, Visual Studio, Firebase, Supabase, AWS DynamoDB

## MISC

**Work Authorisation:** Singapore Citizen; eligible for the **H-1B1** and **J-1** US visas or **HPI** UK visa with no petition required