

ARUL KUMARAN

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EDUCATION

National University of Singapore

Singapore

Bachelor's in Computer Science, Second Major in Mathematics

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

Learnly 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.
- Used Node.js and Express as the backend to implement features like a role-based user system, individual file permissions, easy organisation of content, assignment submissions tracking, payments tracking and Zoom Cloud Recordings API Integration.
- Designed PostgreSQL Database Schema using Sequelize ORM and hosted it on Fly.io.
- Set up CI/CD Pipelines using GitHub Actions to facilitate automated testing and deployment and containerised applications using Docker to streamline deployments by eliminating dependencies.
- Created composable React Components, using Tailwind to style them according to a Figma Design Template.
- Currently being used by 50+ users.

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.

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