

Harishanan Thevarajah

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PROFILE

MSc Advanced Software Engineering student at the University of Leicester with hands-on experience in full-stack development and AI-powered applications. Skilled in building responsive frontends, scalable backends, and integrating APIs like OpenAI and Gemini. Passionate about creating intelligent, impactful systems and contributing to fast-paced and mission-driven teams. Eager to advance my software skills in a placement or intern opportunity, contributing to innovative engineering solutions.

EDUCATION & QUALIFICATIONS

MSc Advanced Software Engineering with Industry, University of Leicester, UK Sep 2024 – Jan 2027

- Currently on track for First Class Honours.
- Modules: Analysis and Design of Algorithms, Service Oriented Architecture, Internet and Cloud Computing, Mobile and Web Applications, Software Measurement and Quality Assurance and Agile Cloud Automation.
- Analysis and Design of Algorithms 87%.

BEng (Hons) Computer Engineering, University of Greenwich, UK

Sep 2021 – June 2024

- First Class Honours degree.
- Advanced Mathematics for Engineering 95%.
- Nominated and shortlisted by faculty as the Best Performing Student.
- Placed in top 5 in the Engineering Without Borders UK (EWB team presentation).

SKILLS

- Front end Technologies : HTML, CSS, JavaScript, React, Tailwind CSS, Bootstrap, Next.js (learning)
- Back end Technologies : Java, Spring Boot, Express.js, Node.js, REST API development
- Databases : MySQL, PostgreSQL, MongoDB
- Tools and DevOps : Git, GitHub, AWS, Docker, Postman, Netlify, Render, Neon
- Software Architecture : Spring MVC, Spring Microservice, Model Driven Architecture, SOA
- Other : DSA, AI Agent, Web Sockets, Agile, Linux

Projects and Experiences

- **Shangri-La Petition Platform (SLPP) (React, Spring Boot, MySQL)**
Developed a secure MVC-based petition platform where users create and vote on petitions, while committees set vote limits, close petitions, and view results. Demonstrates full-stack design, REST APIs, role-based access, and interactive data visualisation with chart.js.
- **Gen AI: Image, Chat, and Recipe Generator (React, Spring Boot, Open AI)**
Developed an AI app where users chat with a bot, generate recipes by listing ingredients and cuisine and create images. Powered by OpenAI API, with React frontend and Spring Boot backend for responsive, real-time AI-driven results.
- **Subscription Tracker API Clone – (Node.js, Express, MongoDB, JWT)**
Built a secure REST API allowing users to track subscription payments and receive automated email reminders before due dates. Used JWT for authentication, QStash for scheduling, and Arcjet to reduce bot abuse and improve security.
- **Job Application Portal (Java, Agile, Software Quality Assurance)**
Developed a Java backend job application portal with JSON file storage in a team of five. Focused on mastering software quality assurance by applying agile methodologies, including Kanban boards, user stories, COCOMO modelling, sprint meetings, PERT charts, and both black-box and white-box testing.
- **AI-Powered Fitness App (Spring Boot, Microservices, Eureka, Keycloak, RabbitMQ) – [In Progress]**
Architected a fitness application using Spring Boot microservices with Eureka Server for service discovery and Spring Cloud Gateway for routing. Integrated Keycloak for secure user authentication and RabbitMQ for asynchronous messaging between services, enabling scalable and modular health tracking features.

- **End-to-End Deployment: Building a To-Do List App (React, Spring Boot, PostgreSQL)**
Built a full-stack To-Do app using React, Spring Boot, and PostgreSQL to explore production-grade deployment. Deployed via Netlify, Render, Neon, and Docker with secure environment configs, CORS setup, and Maven-based builds.
- **AI-Powered Gmail Extension (React, Spring Boot, Gemini API)**
Built a Chrome extension using MutationObserver API to detect Gmail threads and generate professional replies via Gemini API, reducing manual typing. Frontend in React, backend in Spring Boot, with Axios for real-time communication.
- **Application Deployment Automation using AWS SDK (Xtext, EMF, Groovy, AWS SDK) – 83%**
Automated AWS EC2 app deployment using a custom DSL built with Xtext, EMF, and Groovy. Applied model-driven architecture to streamline EC2 setup, GitHub cloning, and environment configuration via AWS SDK, improving deployment speed and reliability.
- **Analysis and Design of Algorithms (Pseudo code, Dynamic Programming) – 87%**
Designed a dynamic programming algorithm for optimal well placement under budget and distance constraints. Outperformed greedy methods by maximising population benefit with $O(nH)$ efficiency, demonstrating a more effective solution strategy.
- **UK Traffic Data Analysis (Groovy, MongoDB Cloud, Kaggle 2024) – 90%**
Analysed UK traffic data using Groovy and MongoDB pipelines to compare eco vs non-eco-friendly vehicle usage. Visualised results with graphs and generated PDF reports. Enhanced scalability with pagination, caching, and optimised queries for faster processing.
- **Textile Management App (MySQL, Oracle Apex, Wireframe) – 91%**
Developed a web-based management system using Oracle APEX and MySQL to help textile managers track shipping, orders, employees, and quality control, achieving a 91% for solving real-world operational challenges.

CERTIFICATIONS

- Java programming with Object Oriented – Continuing Professional Development, May 2025.
- Front-End Web Development – University of Moratuwa, Apr 2025.
- Web design for Beginners – University of Moratuwa, Apr 2025.
- Software Quality Assurance, Foundation Level – Continuing Professional Development, Jan 2025.
- Introduction to DevOps – EC-Council, Aug 2024.

LANGUAGES

- English - Proficiency
- Tamil – Fluent

INTERESTS

- Technology and continuous learning
- Travelling
- Watching movies
- Cricket