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, mission-driven teams. Eager to advance the 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

- **Ongoing Modules:**
  Analysis and Design of Algorithm
  Service Oriented Architecture
  Generative Development
  Personal and Group skills

- **Completed Modules**:
  Software Measurement and Quality Assurance
  Mobile and Web Applications
  Agile Cloud Automation
  Internet and Cloud Computing

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

- Java, C, C++ and MATLAB
- HTML, CSS, JavaScript
- SQL and NoSQL Database
- React and Spring Boot
- Mobile and Web Development
- Agile Software Development
- Testing and QA tools
- Git and GitHub
- Linux and Windows
- API Development & Integration

Projects and Experiences

- **Shangri-La Petition Platform (SLPP) (React, Spring Boot, MySQL)**
  Developed a full-stack petition platform with MVC architecture using React and Bootstrap for a responsive frontend, and Spring Boot, MySQL, and REST API for a scalable backend. Enabled user roles, petition management, and data visualisation with Axios, Cookies.js and Chart.js.

- **End-to-End Deployment: Building a To-Do List App (React, Spring Boot, PostgreSQL)**
  Developed a full-stack To-Do app with React (Vite), Spring Boot, and PostgreSQL. Deployed using Netlify, Render, Neon and Docker with secure environment configs, Maven builds, and CORS for scalable, responsive task management.

- **Gen AI: Image, Chat, and Recipe Generator (React, Spring Boot, Open AI)**
  Programmed a full-stack AI application for generating images, chats, and personalized recipes using React, Vite, and Bootstrap for a responsive UI, and Java, Spring Boot, and Spring AI for a robust backend. Integrated Open AI API and optimized endpoints with Postman for real-time performance.

- **OAuth2 Authentication System (Spring Boot, React, OAuth2)**
  Developed a full-stack secure authentication system with Spring Boot, Spring Security, and OAuth2 for GitHub and Google login. Built a responsive React (Vite) frontend, managing token-based sessions and CORS policies.

- **AI-Powered Gmail Extension (React, Spring Boot, Gemini API)**
  Built a Chrome extension for AI-driven email drafting in Gmail using React, MaterialUI, and JavaScript for the frontend, and Spring Boot with Spring AI for backend integration with Google Gemini API, leveraging Axios and Mutation Observer APIs.

- **Multi-User Chat App (Java, Spring Boot, WebSocket, STOMP, Thymeleaf)**
  Developed a real-time chat app using Spring Boot WebSocket with SockJS and STOMP. Implemented message broadcasting, session handling, and a dynamic UI with Thymeleaf and JavaScript to support multi-user communication.

- **Analysis and Design of Algorithms (Pseudo code, Dynamic Programming) – 87%**
  Implemented an optimal well placement algorithm under budget and distance constraints using dynamic programming, improving population benefit over greedy methods and achieving $O(nH)$ efficiency.

- **Application Deployment Automation using AWS SDK (Xtext, EMF, Groovy, AWS SDK) – 83%**
  Created a DSL for automating AWS EC2 web app deployment. Utilised Xtext, EMF, and Groovy for code generation and AWS SDK integration. Automated tasks like EC2 setup, GitHub cloning and environment configuration with testing error handling and efficiency improvements.

- **Knee Range of Motion Device for Rehabilitation (IoT, MATLAB, Filter Algorithms) – 80%**
  Developed an IoT-based knee range of motion device for rehabilitation, integrated with a data visualisation app. Utilised C programming for device control, MATLAB for data analysis and filtering and MySQL for data storage.

- **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.

- **UK Traffic Data Analysis (Groovy, MongoDB, 2024) – 90%**
  Built Groovy scripts and MongoDB aggregation pipelines to analyse and visualise eco-friendly vs non-ecofriendly vehicle usage from UK traffic data (Kaggle, 2024). Optimised performance with pagination, caching, and query optimisation for scalability.

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
- History
- Travelling
- Cricket