

# Nisuga Jayawardana

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## ABOUT ME

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Disciplined Software Engineer with over 4.5 years of experience specialising in **Backend development** and **GenAI RAG/Agentic workflows**. Proven track record of delivering an AI Assistant for a **UK government client**, developing a large-scale alarm data management system for a **telco org**, and optimising data migration systems of an **ERP application(IFS)**. I combine a deep background in **Python** with modern frontend frameworks such as **React** to build **high-performance, scalable, full-stack** products that solve complex real-world problems.

## WORK EXPERIENCE

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### Resource Media

Bristol, UK

*AI Apps & Web Developer*

*Dec 2023 - Present*

- Directly working with the CEO and the IT team, actively engaging with project planning, technical planning and execution for multiple industrial and client projects.

### Engineering GenAI Assistants for UK GOV and non-GOV clients within the circular economy domain

- Launched an AI Assistant for the **North London Waste Authority (<https://www.nlwa.gov.uk/>)**. Leading the end-to-end software life cycle, including security.
- Mainly engineering GenAI Knowledge base administration/management applications, and GenAI-backed AI Assistants to support the private and government organisations(UK & European) in the Circular Economy domain.
- Extensively applied cutting-edge, advanced GenAI RAG techniques such as hybrid search, reranking, document parsing with docling, review agents, chat summarisation agents.
- Extensively improved the RAG Pipeline with parallel processing steps, database indexing (HNSW, GIN), and Vector embeddings caching to generate useful AI answers within 2-6 seconds.
- Leveraged FastAPI, LangChain, PostgreSQL, pgvector extension, and Docker for the backend development.
- Leveraged React and the Vite bundling tool to craft the frontend widget application with two embed modes(inline, floating) for client websites.
- Secured the frontend widget application and API backend with a strict Authentication layer, advanced Injection(SQL, Command, ORM) attack prevention based on best practices, XSS attack prevention, strict Input Validation and real-time security threat alerts/monitoring, etc.
- Integrated Google Model Armor to stop prompt injection attacks, sensitive data leaks, and harmful content.
- Applied advanced infrastructure and server security best practices such as routine vulnerability assessments, threat monitoring/logging, code scanning, backups, rate limiting, least privileged access and many more.

### High-performance, modern Website engineering

- Architected and launched the new official website of the current company ([resourcemedias.co.uk](https://resourcemedias.co.uk/)) using AstroJS, Svelte, React, Netlify and Sanity CMS.
- Leveraged advanced HTML and web asset caching mechanisms and advanced frontend optimisation techniques(web bundling, minifying assets, webp images, reducing main thread load, etc.) to achieve a **0.5-1 second page load speed**.

### Side support for WordPress website development and SLA support

- Crafted and deployed custom websites for business clients ([resourcefutures.co.uk](https://resourcefutures.co.uk/), [bb-reg-net.org.uk](https://bb-reg-net.org.uk/), [bbia.org.uk](https://bbia.org.uk/)).

### IFS R&D

*Software Engineer, Data team*

Colombo, Sri Lanka

*Jan 2022 - Jan 2023*

- Enhanced performance of IFS Data Migration Manager, achieving a 3x faster overall processing speed.
- Enhanced the data migration process by implementing a revised table definition build process that addresses critical bugs in the IFS Data Migration Manager.
- Leveraged unit testing to improve the functioning accuracy of IFS Data Migration Manager and IFS Data Catalog.

## **X.O Concepts**

**Colombo, Sri Lanka**

*Software Developer*

*Jan 2021 - Aug 2021*

- Developed a nationwide Cell Tower Alarm Management Application for a major telecommunication provider (Dialog PLC). Successfully solved critical Kafka issues with their network operations team.
- Designed and crafted a crop management dashboard for an Agri company (Viridio)

## **Omobio, Sri Lanka**

*Nov 2019 - May 2020*

*Internship - Full-stack developer*

- Contributed to multiple projects of the Digital AD-Platform System (adReach).
- Crafted an Interview Management Portal for the Company's HR Division.
- Gained valuable experience in SCRUM, Git, Task Management, React, Yii, ExtJS, and Material-UI.

*Arimac Digital - 3D Designer*

*Nov 2018 - Feb 2019*

- Collobarated with design and animation teams.
- Modelled/textured 3D models using Autodesk Maya and Substance Painter.
  - Models for SL Army Exhibition 2018 3D Video
  - Models for Dialog AR Calendar 2019.
  - 3D Models (Military boat, Electric crane) for Nero - 3D Game.

## **EDUCATION**

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**University of the West of England**

**Bristol, UK**

*MSc in Information Technology*

*Graduation Date: Feb 2024*

**Sri Lanka Institute of Information Technology**

**Colombo, Sri Lanka**

*BSc. (Hons) in Software Engineering*

*Graduation Date: Mar 2022*

## **SKILLS**

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**Frontend:** React, ReactNative, Svelte, AstroJS

**Backend:** Python(incl. FastAPI), NestJS, NodeJS, Java (J2EE & Springboot)

**Infra:** Terraform, Docker

**Cloud:** AWS(EC2, SNS, S3, Route53), Google Cloud (Compute Engine, MapsAPI, VertexAI)

**Database:** MySQL, PostgreSQL, MongoDB

## **CERTIFICATES**

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- Docker Mastery: with Kubernetes +Swarm
- Programming Foundations: Algorithms
- Continuous Integration and Continuous Delivery with GitLab
- Claude Code 4: Agentic Coding for Professional Developers

## **SPORTS/HOBBIES/INTERESTS**

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- A badminton player with a track record of winning all-island, inter-school badminton team championships
- A fan of cats and aviation
- Cricket, Table tennis
- Travelling and gatherings

## **RIGHT TO WORK**

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**Currently hold the right to work on a Graduate Visa expiring on 31/05/2026 and will need visa sponsorship from the employer after 31/04/2026.**

