



daham.serenedge.com

Daham Dissanayake

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SUMMARY

Second-year Undergraduate Student at the University of Westminster with a strong foundation in Computer Science and a specialization in IoT-driven Machine Learning. Experienced in full-stack web development with Next.js and microservices architecture. Proven ability to lead technical teams in university projects and a commitment to creating clean, user-centric digital experiences. **Comprehensive project documentations are available at daham.serenedge.com.**

TECHNICAL SKILLS

AI & Machine Learning : TensorFlow, YOLOv11, OpenCV, Edge Impulse, Scikit-learn, LangChain

Full-Stack Frameworks : Next.js, Ballerina, NestJS, FastAPI, React.js, Vite.js, Tailwind CSS

Programming Languages : Python, Java, C++, TypeScript, JavaScript, SQL, HTML5/CSS3

IoT & Embedded Systems : ESP32, ESP8862, Raspberry Pi, Arduino

Tools & Infrastructure : Git, Docker, Choreo WSO2, Vercel, PostgreSQL, MongoDB

FEATURED PROJECTS

SoterCare | IoT & ML Elderly Care | 2025 – Ongoing

<https://sotercare.com>

- **Second Year University Project:** An innovative monitoring system designed for proactive safety; predicts falls and detects urinary incontinence in real-time.
- Integrates wearable sensor nodes with a dedicated edge gateway for automated emergency alerts.
- **Tech:** IoT, Raspberry Pi, React Native, C++, NestJS, Python, PostgreSQL, Edge Impulse



ImgHarvest | Image Dataset Harvester | 2026

<https://github.com/DahamDissanayake/img-harvest-ballerina>

- AI-powered dataset harvester leveraging a microservices stack to refine search queries and automate image collection for ML training.
- Features query refinement via Groq API, SerpApi integration, and parallel client-side processing for ZIP packaging.
- Currently being deployed on Choreo WSO2 and licensed under the GNU General Public License.
- **Tech:** Next.js, Ballerina (bal), Groq API, SerpApi



VibeCheck | UI Debugging Chrome Extension | 2025

<https://github.com/DahamDissanayake/web-design-prompt-extension>

- Chrome Extension (Manifest V3) designed to bridge visual layout bug identification and fixation.
- Allows users to overlay precision grids and mark 'friction points,' automatically synthesizing structured AI prompts.
- Successfully deployed and currently available for download on the Chrome Web Store.
- **Tech:** JavaScript, HTML5, CSS3, Manifest V3



Relmage Agent | AI Community Avatars | 2026

<https://github.com/DahamDissanayake/Relmage-Agent>

- AI-powered constant avatars designed for communities, providing a consistent visual identity through generative models.
- Engineered a high-performance backend to handle generative AI workloads with a responsive Next.js frontend.
- **Tech:** Next.js, FastAPI, Python, Gemini (Nano Banana)



TECHNICAL MINI-PROJECTS

Dev-Pulse API | Real-time GitHub metrics aggregator | 2026

<https://github.com/DahamDissanayake/dev-pulse-api>

- Dev-Pulse aggregates GitHub API data to generate a secure, real-time portfolio score via Ballerina and WSO2 Choreo.

Imposter Game | Custom Feature-Rich Alternative | 2025

<https://github.com/DahamDissanayake/Imposter-Game-But-Customized-V2>

- Built using React/Vite as a free alternative to paywalled apps; focuses on accessibility and seamless Vercel deployment.

Flood-Watch [NullProduct] | IoT Flood Warning | 2025

<https://github.com/DahamDissanayake/NullProduct-VERTEX25>

- Winning runners-up at Vertex'25; offline-capable system using ESP32 Magicbit and Ultrasonic sensors for flash flood detection.

VisionSlide | Touchless Controller | 2026

<https://github.com/DahamDissanayake/vision-slide>

- Python-based hands-free presentation controller using OpenCV and PyAutoGUI to simulate keystrokes via hand tracking.

Apple HomeKit Automation | Native IoT Switch | 2024

<https://github.com/DahamDissanayake/Apple-homekit-esp8266>

- Native HomeKit-integrated IoT switch enabling Siri voice control via HAP protocol on ESP8266 without a bridge/gateway.

EDUCATION & CERTIFICATIONS

BSc (Hons) in Computer Science (UG)

2025 – Ongoing

Informatics Institute of Technology (IIT), Sri Lanka | University of Westminster, London

G.C.E. Advanced Level - Physical Science

Completed: Dec 2024

Bandaranayake College, Gampaha | Subjects: Physics, Combined Mathematics, ICT

Professional Certificate in Machine Learning

Completed: 2025

Informatics Institute of Technology Professional Development Unit (PDU)

Professional Certificate in Marketing

Completed: 2023

Sri Lanka Institute of Marketing (SLIM)

LEADERSHIP & VOLUNTEERING

Interact Club - Bandaranayake College

2023 – 2024

Executive Committee Member

Sri Lanka

IEEE CIS IIT (Prestige)

2025

Event Volunteer

Colombo

REFERENCES

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