Nirmal Fernando

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EDUCATION

Asia Pacific Institute of Information Technology, Sri Lanka   Mar 2025 – Present
Bachelor of Science in Computer Science   *Colombo, Sri Lanka*

National Institute Business Management, Sri Lanka   Nov 2023 – Jan 2025
Higher National Diploma in Software Engineering (GPA - 3.49)   *Colombo, Sri Lanka*

National Institute Business Management, Sri Lanka   Oct 2022 – Nov 2023
Diploma in Software Engineering (GPA - 3.82)   *Kurunegala, Sri Lanka*

EXPERIENCE

Anka Technologies   May 2024 – Present
Associate Software Engineer & Robotics Instructor   *Hybrid - Part Time*

- Maintain and develop software systems, ensuring reliability, scalability, and adherence to industry best practices.
- Collaborate across the full Software Development Life Cycle (SDLC) — from requirements gathering and design to implementation, testing, and deployment.
- Serves as a robotics instructor, teaching children foundational robotics and programming concepts, fostering STEM engagement through hands-on learning.
- Works on Flutter mobile applications, developing responsive UI components, integrating RESTful APIs, and implementing real-time data updates.

Intern – Software Engineer   *May 2024 – May 2025*

- Contributed to the development and maintenance of software applications.
- Contributed to the development of robotics applications.
- Conducted robotics education sessions for children in Colombo, focusing on hands-on learning and STEM engagement.

Inolance   Feb 2025 – Jul 2025
Freelance Software Engineer & Project Coordinator   *Remote*

- Managed a client project end-to-end, from requirements gathering and planning to development, testing, and final delivery.
- Tracked milestones, deadlines, and deliverables using Jira board to maintain project visibility.
- Conducted regular progress check-ins and status updates, proactively identifying risks and resolving blockers.

PROJECTS

CollabForge – Creator–Brand Collaboration Platform | GitHub   Mar 2025 – Oct 2025
Next.js, Node.js, Express.js, PostgreSQL, RESTful APIs, Jira

- Conceptualized and developed a **creator–brand collaboration platform** over an 8-month period, progressing from ideation and market research to system design and development.
- Conducted **domain research and problem validation** to identify inefficiencies in sponsorship discovery, communication, and campaign coordination workflows.
- Designed a **scalable backend architecture** with RESTful APIs and PostgreSQL to support creator profiles, brand campaigns, and collaboration workflows.
- Led project planning and coordination activities including sprint planning, backlog management, and progress tracking using Jira.
- Coordinated development timelines and feature delivery while balancing technical constraints and MVP goals.

Twitch VOD Downloader and YouTube Uploader | GitHub   Mar 2025 – Apr 2025
Python, Streamlink, FFmpeg, YouTube Data API, Twitch API

- Built an automated pipeline for downloading Twitch VODs and uploading them to YouTube in response to Twitch's new 100-hour storage limit policy affecting content creators.
- Implemented chunk-based processing using Streamlink and FFmpeg to handle large video files within Google Colab's storage constraints and memory limitations.

Smart Workplace Wellness System | GitHub   Jan 2025 – Feb 2025
Flutter, ESP32, Firebase

- Built an IoT monitoring system for workplace wellness tracking heart rate (MAX30102), ambient light (BH1750FVI), noise levels (LM386), and air quality (MQ135) sensors.
- Integrated ESP32 microcontroller with Firebase for real-time data storage and created a Flutter mobile interface for user interaction.
- Implemented automated lighting control based on sensor readings to maintain optimal workspace conditions.

NuraNest - AI Mental Health Platform | GitHub   Aug 2024 – Dec 2024
Node.js, Express.js, PostgreSQL, RESTful APIs, Llama AI Model

- Fine-tuned Llama AI model with custom psychological support datasets to create a specialized chatbot for mood enhancement applications.
- Built backend architecture following MVC patterns and ORM principles with PostgreSQL for a mobile-first psychological wellness platform.
- Designed RESTful API endpoints to support seamless integration between AI model responses and mobile application features.

ACHIEVEMENTS

1st Place – APIIT 24-Hour Hackathon   2025
Flutter, Next.js, Node.js, Express.js, PostgreSQL, RESTful APIs

- Designed an **offline-first disaster response system** that operates **without cellular networks**, enabling communication during network outages.
- Leveraged **Bluetooth and Wi-Fi Direct** to establish **device-to-device communication** for transferring critical data between nearby devices.
- Implemented a **gossip-based data propagation algorithm**, allowing messages to hop between devices and physically carry information to areas with restored cellular connectivity.
- Enabled **nearby sharing and mesh-style networking** to ensure resilient message delivery for emergency coordination in disaster-affected regions.

TECHNICAL SKILLS

Languages: JavaScript, Java, Python, HTML/CSS, SQL
Databases: PostgreSQL, MySQL, MongoDB, SQLite, Firebase
Technologies/Frameworks: Node.js, Express.js, Flutter, RESTful APIs
Developer Tools: Git, GitHub Actions, VS Code, Postman, Google Colab, ESP32, Arduino, Jira
Soft Skills: Problem Solving, Team Collaboration, Adaptability, Fast Learner, Project Management

REFERENCES

T B R Ekanayake
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