

# MIRCO FERNANDO

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[github.com/MircoFernando](https://github.com/MircoFernando) • [portfolio-website](#) • [medium.com/@mircofdo](https://medium.com/@mircofdo)

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## PROFESSIONAL SUMMARY

Software Engineering undergraduate with hands-on experience in full-stack web development using React, Node.js, MongoDB, and modern cloud-based development practices. Experienced in building scalable web applications, implementing secure authentication systems, developing REST APIs, and managing complete software development lifecycles. Additionally skilled in Artificial Intelligence, Generative AI, and Machine Learning, with practical experience integrating AI capabilities into software solutions. Passionate about creating impactful products through clean architecture, problem-solving, and collaborative development.

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## EXPERIENCE

### Co-Founder | Fullstack Developer - Olyra Labs

Feb 2026 - Present

- Co-founded a software development startup, contributing to product strategy, technical decision-making, and software delivery.
  - Designed and developed full-stack web applications using React, Next.js, Node.js, and modern web technologies, taking solutions from concept to deployment.
  - Collaborated directly with clients to gather requirements, translate business needs into scalable software solutions, and deliver products in Agile environments.
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## PROJECTS

### Enovex - Smart Solar Power Management System / MERN stack

- Designed and developed a full-stack platform for monitoring solar energy production and operational performance across multiple units. Built secure role-based access control (RBAC), Clerk authentication, interactive analytics dashboards, and real-time performance tracking. Architected scalable REST APIs and integrated payment processing through Stripe while following clean architecture principles and modern deployment practices.

### POS & Inventory Management Platform - Olyra Labs / React, ExpressJS, NodeJS, FireBase

- Contributed to develop a production-ready point-of-sale and inventory management platform for business operations, supporting order processing, inventory tracking, customer management, and payment workflows. Collaborated directly with stakeholders to translate business requirements into scalable software solutions while contributing to frontend architecture, analytics dashboards, and backend integrations.

### Prompt Optimization Engine Application / LangGraph, Google ADK, FastAPI, React

- Engineered a multi-agent AI platform to evaluate and compare graph-based and imperative agent orchestration frameworks. Implemented the Reflection agentic design pattern on both LangGraph and Google ADK, designing autonomous agent workflows, state management systems, and an interactive chat interface. Generated practical insights into AI agent architecture, workflow coordination, and framework trade-offs through hands-on experimentation. Detailed deep-dive in this project ([medium.com/@mircofdo](https://medium.com/@mircofdo)).

### Social Media Trends Analysis / Machine Learning

- Developed machine learning models to predict social media engagement and identify emerging content trends using real-world datasets. Applied supervised and unsupervised learning techniques to uncover key engagement drivers and viral content patterns, achieving a Top 3 placement among more than 200 participants in ZuuCrew AI hackathon for Foundations of Machine Learning.

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## EDUCATION

**BSc (Hons) Software Engineering**

University of Lancashire, UK

Oct 2024 - Present

**Foundation Year - NCC Education - UK, Information Technology**

UCL(Universal College Lanka), Sri Lanka

July 2023 - Aug 2024

- Relevant coursework, Achieved Distinctions on all subjects
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## CERTIFICATIONS

- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate / *Oracle*
  - Docker for Absolute Beginners with Hands on Projects / *CoDeKu*
  - AWS Cloud Practitioner Essentials / *AWS*
  - Developing Front-End Apps with React / *IBM*
  - Web and Programming Foundations / *STEM Link*
  - Full Stack Engineering / *STEM Link*
  - Developing Back-End Apps with Node.js and Express / *IBM*
  - Foundations of Machine Learning / *Zuu Crew*
  - Object Oriented Programming Specialization / *University of London*
  - Level 3 Diploma in Information Technology, Information Technology / *ESOFT Metro Campus*
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## ACHIEVEMENTS / COMPETITIONS

- **Achieved Top 3, ZuuCrew AI Hackathon** - Implemented a Comprehensive Machine Learning Social Media trends analysis.
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## TECHNICAL SKILLS

- **Languages:** Java, JavaScript, TypeScript, SQL (MySQL), HTML5, CSS3, Python, C++, Dart
  - **Frameworks & Libraries:** ReactJS, NodeJS, Express, NextJS, Tailwind CSS, Flutter
  - **AI/ML:** LangChain, LangGraph, Google ADK, PyTorch, Scikit-Learn, RAG, Fine-Tuning
  - **Developer Tools:** VS Code, Cursor, IntelliJ IDEA, Visual Studio, Docker, Git, Postman
  - **Databases:** MySQL PostgreSQL, MongoDB
  - **Methodologies:** Agile, Scrum, Clean Architecture
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## ADDITIONAL SKILLS

- **Leadership:** Guided teams and coordinated tasks as Deputy Head Prefect.
  - **Communication:** Facilitated clear cross-functional teamwork and client interactions.
  - **Adaptability:** Rapidly mastered new programming frameworks and tools.
  - **Teamwork:** Collaborated seamlessly to maintain a productive project dynamic.
  - **Problem-Solving:** Applied structured logic to engineer effective technical solutions.
  - **Time Management:** Prioritized tasks to meet strict deadlines in fast-paced environments.
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## REFERENCES

- **Mr. Manupa Samarawickrama | STEM Link** - *chathwara432@gmail.com*
  - Guided and supervised my full-stack coursework and project development, mentor in STEM Link's bootcamps.
- **Dr. Madushi Pathmaperuma | Visiting Lecturer at UCL** - *madushi.pathmaperuma@ucl.lk*
  - Lecturer for my Computational Thinking module, overseeing my foundational logic and problem-solving coursework.
- **Mr. Prabhath Gunawardhana | Delivery Manager at LSEG** - *prabhath.gunawardhana@ucl.lk*
  - Lecturer for my Agile Professional module and was the academic supervisor for our agile assessment.