






Kusal Madura Yapa

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 No : 49, Saumya Uyana Halpita kesbawa (piliyandala) Colombo



Highly motivated Software Engineering undergraduate with hands-on experience in full-stack development, reinforcement learning, and AI-based solutions. I have led the development of an adaptive gamification element-based platform using Deep Q-Networks (DQN) to personalize learning experiences. Known for strong leadership, collaboration in agile environments, and contributing to award-winning projects like the OPTIMAXER AI project (NBQSA Merit Award Winner 2023). Proficient in a wide range of technologies.

Technical Skills

- Object-oriented programming (OOP)
- Mobile App development
- Web development
- AI integration
- Agile software development
- Version controlling

Soft Skills

- Time management
- Team Work
- Ability to learn
- Environmentally Adaptive
- Problem Solving
- Creativity
- Leadership

Technologies

Languages

- Java
- Python
- Swift
- JavaScript

Web

- HTML
- CSS
- Next.js
- Nest.js
- Flask

Mobile

- iOS (Swift UI)
- Android

Design Tools

- Figma
- Canva

Cloud Platforms

- AWS
- Azure

Tools

- GitHub
- Xcode
- VsCode
- Colab

Work Experience

Trainee Software Engineer – 99X Technology Limited

July 2023 – July 2024 | Colombo, Sri Lanka

key responsibilities assigned -

- Design and optimize prompts for AI systems to enhance accuracy and functionality.
- Facilitate Agile processes as Scrum Master in the assigned project.

Awards winners as a team, Contributed to the OPTIMAXER AI project, NBQSA Merit Award Winner (2023), corporate research and development

- **Employee Upskilling and Reskilling Application**

Contributed as a team member designing and developing an internal platform for employee skill development. My role involved ensuring seamless backend integration and creating a user-friendly experience, enabling employees to customize their learning journeys.

- **AI Web Solutions Platform**

Contributed to the development of a modern web application, utilizing Vue.js, and Nuxt.js. The application focused on form submissions, real-time validation, SEO optimization, and external platform integration. My role involved designing and optimizing the system to ensure scalability, user engagement, and visibility.

- **AI - HR Bot**

Worked on building an AI-powered HR Bot solution, integrating OpenAI for actionable insights and using vector databases for efficient data retrieval. My role involved enhancing decision-making through prompt engineering and streamlining HR tasks to improve overall efficiency.

- **AI Research Hub**

Contributed to the development of a platform showcasing AI research and case studies using Next.js and Vue.js. My role involved creating an intuitive and informative interface to highlight AI advancements and the company's global contributions.

Project Experience

2024-2025 Final Year

- **Adaptive Gamification Model for Enhancing Programming Education**

For my final year project, designed and implemented an adaptive gamification model aimed at enhancing programming education. This system utilized reinforcement learning (DQN) and basic gamification elements like feedback, Progress Bar leaderboards, and real-time feedback to personalise and adapt quizzes based on the learner's knowledge level and pace. The system dynamically adjusted the difficulty of programming tasks, offering personalised feedback to keep students engaged and motivated, reducing dropout rates, and improving knowledge retention. The learning experience for Generation Z students is normalised to game-like environments. The project aimed to bridge gaps in traditional programming education by making learning more engaging, interactive, and tailored to each student's needs.

2023-2024 Intern Software Engineer (Industrial Placement with 99x Technology Limited)

Educational Background

University of Westminster – BEng (Hons) Software Engineering 2021 – 2025

Final Year

- Mobile Native Application Development
- Formal Methods
- Concurrent Programming (Java)
- Computer Science Final Project
- Cyber Security

3rd Year - Industrial Placement with 99X Technology Limited

2nd Year - Average Marks - 71.6%

1st Year - Average Marks - 85.1%

ESOFT Metro Campus

Diploma in Information Technology | 2020 – 2021

Richmond College

Advanced Levels in Biology, Chemistry, and Physics | 2006 – 2019

Contributed towards other cross-functional activities and Volunteered

- Member of the Music Innovative : 2023 / 2024
- Volunteered the Xternship program held at IIT, Sri Lanka for BIS students in web development : 2023 / 2024
- STEM UP is a foundation to give support to students who are willing to be programmers 2022-2023

Achievements

2022-2023

Marit Awards winners as a team Contributed to the OPTIMAXER AI project, NBQSA Merit Award Winner (2023) corporate research and development

2021-2022

- **OpenHack 2.0 Designathon 1st Runner up**

Design a prototype for a home energy management system using modern UI/UX concepts.

- **Finalist team member of RevolUX 2.0 UI/UX**

Designathon organized by AIESEC of the University of Colombo School of computing

- Participated in IEEEExtreme 16.0 Programming - Island 67

Organized by IEEE at IIT

- Participant to hacktoberfest 2022

For knowledge in version controlling in git hub and open source contribution

Languages

- English
- Sinhala

REFERENCES

Pumudu Fernando

Senior Lecturer - Grade I | Course Leader -

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Certificates and more about me

