Kusal Madura Yapa

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Newly graduated BEng (Hons) Software Engineering professional from the University of Westminster, with a passion for full-stack development, AI and machine learning. Skilled in reinforcement learning and scalable web applications, I contributed significantly to the NBQSA Merit Award-winning OPTIMAXER AI project (2023), leading the development of an adaptive gamification platform using Deep Q-Networks (DQN) to personalize learning. With hands-on experience in agile environments, I am eager to apply my expertise to solve challenges and deliver innovative, impactful AI/ML solutions. and be ablity to change with new technologies withing each and ever change required.

SKILLS

- Programming Languages: Python, Java, JavaScript, Swift
- Frameworks & Libraries: Vue.js, Next.js, Flask, TensorFlow, PyTorch
- Data management: MySQL, MongoDB, AWS RDS
- Tools & Platforms: AWS, Azure project management, GitHub, Figma, Xcode, VSCode
- Specialisations: Full-Stack Development, Reinforcement Learning, Deep Q-Networks, AWS
- Soft Skills: Leadership, Collaboration, Problem-Solving, Agile Project Management

WORK EXPERIENCE

Trainee Software Engineer – 99X Technology Limited

July 2023 – July 2024 | Colombo, Sri Lanka
key responsibilities assigned

- 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.
Your paragraph text

- Optimaxer AI Platform

Contribute to the development of a platform with Agent Creation and the extraction tools with the AI-based Chat Bot, and this product Award winners as a team, contributed to the OPTIMAXER AI project, NBQSA Merit Award Winner (2023), corporate research and development

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 Gene 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 colobarate Informatics Institute of Technology - IIT

BEng (Hons) Software Engineering | 2021 – 2025. - 2nd Upper class

ESOFT Metro Campus

Diploma in Information Technology | 2020 – 2021

ACHIEVEMENTS AND CERTIFICATES

2024-2025
- **AWS Educate: Introduction to Generative AI**
- **AWS Educate Machine Learning Foundations**
- **AWS Educate Introduction to Cloud 101**

2022-2023
- **NBQSA Merit Award Winner (2023) corporate research and development.** Marit Awards winners as a team Contributed to the OPTIMAXER AI project

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 IEEEXtreme 16.0 Programming** - Island 67 Organized by IEEE at IIT
- **Participant to hacktoberfest 2022**

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

REFERENCES

Pumudu Fernando
Senior Lecturer - Grade I | Course Leader
(BSc Computer Science, School of Computing)
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MORE ABOUT ME

Or visit https://linktr.ee/kusal_madura_yapa