

# YASINDU DASANGA DE MEL

## Software Engineer - Full Stack Developer – Game Developer

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- Location: Panadura, Western Province, Sri Lanka

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### SUMMARY

Recently completed Software Engineering degree with specialized experience in developing full-stack web and mobile applications projects using React, React Native, Node.js, and Firebase. Specialized in AI-powered mobile app development and machine learning integration. Proven track record of delivering complex projects from conception to deployment with expertise in agile methodologies and database management.

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### SKILLS

**Frontend Development:** React.js, React Native, HTML5, CSS3, JavaScript, TypeScript, Material-UI, Bootstrap, jQuery, Responsive Design

**Backend Development:** Node.js, Express.js, RESTful APIs, PHP, Java, API Development, Python, Microservices Architecture

**Mobile Development:** React Native, Android Studio, Java, Expo CLI, Cross-platform Development, Performance Optimization

**Database Technologies:** Firebase Firestore, MongoDB, MySQL, Database Design, Real-time Synchronization

**Machine Learning:** Python, pandas, NumPy, Scikit-Learn, TensorFlow.js, matplotlib, seaborn

**Development Tools:** VS Code, Android Studio, GitHub, Git, Version Control, npm, Firebase Console, Expo CLI

**Testing:** Jest for Unit Testing, Postman for API Testing, Debugging

**Methodologies:** Agile Development, Scrum Framework, CI/CD, Software Development Life Cycle (SDLC)

**Soft Skills:** Team Collaboration, Problem-Solving, Time Management, Fast Learning, Project Management

**Languages:** English (Fluent), Sinhala (Native)

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### EDUCATION

#### **Bachelor of Science (Hons) in Software Engineering**

SLIIT City Uni / University of Bedfordshire

May 2024 - April 2025

#### **Higher Diploma in Information Technology (HND)**

SLIIT City Uni

January 2021 - March 2024

### **Foundation Certificate in Information Technology (FCIT)**

SLIIT City Uni

January 2020 - December 2020

### **G.C.E. Advanced Level / G.C.E. Ordinary Level**

St. John College

January 2005 - January 2019

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## **PROJECTS**

### **Fitness Warrior App (Research Project) - Full Stack Developer - React Native**

*Technologies: React Native, TypeScript, Firebase, TensorFlow.js, Machine Learning*

- Developed comprehensive fitness tracking mobile application using React Native and TypeScript with Firebase backend
- Implemented AI-powered step counter with TensorFlow.js achieving 95% accuracy in physical activity tracking using device sensors
- Engineered calorie tracking system with vector-based food search engine processing 1000+ food database entries
- Designed dynamic goal system generating personalized fitness targets, increasing user engagement by 40% through data-driven recommendations
- Integrated real-time data synchronization with Firebase Firestore supporting multiple concurrent users

### **Jump Math Game - Game Developer - JavaScript**

*Technologies: HTML5, CSS3, JavaScript, Banana API*

- Developed interactive 2D platformer game combining mathematical challenges with engaging gameplay mechanics
- Implemented responsive double jump system and collision detection using HTML5 Canvas and core JavaScript
- Integrated external Math API generating 500+ dynamic problems across 3 difficulty levels for enhanced learning
- Designed banana challenge feature with API integration providing players second-chance opportunities, improving completion rates by 25%
- Engineered comprehensive scoring system with level progression tracking user performance across 10+ game levels

### **Student Management System - Full Stack Developer - Web Application**

*Technologies: HTML5, CSS3, JavaScript, Bootstrap, jQuery*

- Created responsive web-based student management system handling 200+ student records with real-time data processing
- Developed comprehensive reporting functionality generating automated academic progress reports and attendance tracking
- Implemented Bootstrap responsive design ensuring 100% mobile compatibility across all device screen sizes
- Built dynamic user interface with jQuery enabling seamless faculty-student communication and data management
- Designed user-friendly administrative dashboard streamlining academic operations and reducing manual processes by 60%

### **Car Management System - Full Stack Developer - Cross-Platform**

*Technologies: React, Java, Android Studio, RESTful APIs*

- Developed comprehensive automotive management platform using React frontend and Java-based mobile application
- Built dynamic web application managing 500+ vehicle records with automated maintenance scheduling and tracking
- Created Android mobile app using Java extending functionality to mobile platforms with offline data synchronization
- Implemented customer appointment system processing 50+ weekly bookings with automated reminder notifications
- Designed inventory tracking module optimizing parts management and reducing administrative overhead by 45%

## **Movie Explorer – Full Stack Developer – MERN Stack**

*Technologies: React.js, Node.js, MongoDB, Express.js, Material-UI, AI Integration, TMDB API, GitHub Actions, Jest, Husky*

- Developed comprehensive movie discovery platform using React.js and Node.js with MongoDB backend supporting user authentication and personalized experiences
- Implemented AI-powered review system featuring conversational chatbot and smart composer, reducing review writing time by 60% through natural language processing and automated suggestions
- Engineered advanced recommendation engine analyzing user viewing history, ratings, and preferences to generate personalized movie suggestions with 85% user satisfaction rate
- Designed mood-based discovery system with emotional state mapping, enabling users to find movies matching their current feelings through genre and keyword analysis algorithms
- Integrated real-time streaming availability across 12+ platforms using external APIs, providing users instant access to where movies can be watched
- Built collaborative community features including discussion forums, movie lists, and social interactions supporting concurrent user engagement and content sharing
- Established robust CI/CD pipeline with GitHub Actions, Husky pre-commit hooks, and automated testing achieving 95% code coverage and zero-downtime deployments
- Developed responsive design architecture supporting mobile, tablet, and desktop devices with optimized performance and 2-second average load times

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## **CERTIFICATIONS**

**Diploma in HTML5, CSS3, JavaScript** - Alison, June 2024

**Full Stack React E-Commerce Project** - GreatStack, May 2025

**Postman Essential Training** - LinkedIn Learning, May 2025

**React JavaScript - Fundamental to Coding & New Beginning** - Alison, November 2023