

# MANODYA DISSANAYAKE

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## SUMMARY

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Data Science undergraduate specializing in AI-driven applications, full-stack web development, and mobile solutions. Strong experience building LLM-powered systems, MERN-stack platforms, and Mobile applications using Kotlin. Proficient in Python, JavaScript, SQL, and modern cloud tools, with hands-on experience in vector databases, REST APIs, and scalable system design. Passionate about applying data science and software engineering skills to solve real-world problems.

## EXPERIENCE

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### Software & Data Engineer (Academic & Team-Based Projects)

2023 – Present

Sri Lanka Institute of Information Technology

- Designed and developed full-stack web, mobile, and AI-driven applications as part of academic and collaborative team projects.
- Applied Agile methodologies, version control (Git/GitHub), to deliver scalable solutions on time.
- Collaborated with cross-functional teams to analyze requirements, design system architectures, and implement production-ready features.

### Freelance Web developer

2025 – Present

- Developed responsive websites using Next.js and React.js for personal and client-based projects.
- Implemented smooth, interactive animations using GSAP to enhance user experience.
- Built reusable UI components with Tailwind CSS and optimized performance and SEO.

## PROJECTS

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### Tutor AI - Multi-Agent AI Tutoring System

August 2025 - October 2025

- Built a multi-agent AI tutoring system using FastAPI and Google Gemini AI to generate personalized lessons, adaptive quizzes, and real-time feedback.
- Implemented MongoDB Atlas Vector Search for semantic caching, reducing LLM response latency and optimizing API usage costs.

Technologies - Python, FastAPI, React.js, MongoDB, Google Gemini AI, MongoDB atlas search

### FutureWatt - Sustainable Energy Management System

April 2025 - June 2025

- Developed a full-stack MERN stack platform with Stripe integration for secure online payments and an AI chatbot for automated support and inquiries.
- Designed multi-role dashboards and a modular UI system with 50+ reusable components, increasing user engagement by approximately 70%.

Technologies - React.js, Node.js, Express.js, MongoDB, Stripe, Tailwind CSS

### Portfolio - Interactive 3D Portfolio website

November 2025 - December 2025

- Developed an immersive 3D portfolio website using Next.js and Three.js with optimized animations powered by GSAP and Framer Motion and responsive UI with Tailwind CSS and Spline 3D elements.
- Integrated EmailJS for direct user communication and automated responses and firebase to store feedback.

Technologies – Next.js, React, Three.js, GSAP, Tailwind CSS, Framer-motion, Spline, EmailJS, Firebase

### **BalanZ - Personal Finance Tracker App**

**April 2025 - June 2025**

- Developed a secure, offline-first Android application using Kotlin, MVVM architecture, and Room persistence library with AES-256 encryption to ensure secure local data storage.
- Integrated MPAndroidChart to visualize real-time financial analytics with a modern Material Design interface.

Technologies - Kotlin, MVVM, Room, AES-256, Material UI, Android Studio

### **Motofix – Online Vehicle Spare Parts Management System**

**July 2024 - Sep 2024**

- Built a full-stack Java-based e-commerce platform using JSP, Servlets, and MySQL following the MVC architecture with role-based authentication for admin and customer portals and secure transaction workflows.
- Improved transaction efficiency and customer engagement by approximately 40%.

Technologies - Java, JSP, Servlets, MySQL, HTML5, CSS3, JavaScript, Apache Tomcat

## **EDUCATION**

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**BSc (Hons) in Information Technology - Specializing in Data Science** - Sri Lanka Institute of Information Technology

*June 2023 – Present*

**GCE Advanced Level and Ordinary level** - Ranabima Royal College

*2013-2021*

## **CERTIFICATIONS**

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- IBM – Data Fundamentals
- IBM – Data Science Foundations Level 1
- IBM – Data Science Foundations Level 2 (V2)
- KodeKloud – Fundamentals of DevOps
- KodeKloud – Python Basics

## **SKILLS AND ABILITIES**

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**Languages:** Python, Java, Kotlin, JavaScript, C, C++

**Web Development:** React.js, Node.js, Express.js, Next.js, HTML5, CSS3, Tailwind CSS, Three.js, JSP, GSAP

**Data & AI:** Data Science, Machine Learning, AI Systems

**Databases:** MySQL, MongoDB, SQLite, Firebase, AstraDB

**Tools & Cloud:** Git, GitHub, AWS, Google Cloud, Azure, Netlify, Postman, Figma, Android Studio, Jira, Trello, Cursor

## **ADDITIONAL INFORMATION**

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Open to internship and junior-level roles in Data Science, Software Engineering, AI Engineering and IT. Strong interest in scalable systems, AI-driven applications, and data-centric problem solving.

## **REFERENCES**

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