Udayanga Weerakoon

BSc (Hons) in IT Specialize in Data Science (Reading)

0764143047 📞

udayangaweerakoon212@gmail.com ✉

LinkedIn/UdayangaWeerakoon 🔗

GitHub/UdayangaWeerakoon 🔗

Portfolio

Profile

Motivated Data Science undergraduate with skills in full-stack development, automation, and AI-based solutions. Experienced in data engineering basics and currently learning cloud, machine learning, and deep learning. Passionate about creating smart, practical systems and looking for an internship to gain real-world experience and contribute to meaningful projects.

Projects

Agentic AI Fashion Trend Prediction & Social Media Analytics Platform

- Developed a full-stack AI system to predict and analyze global fashion trends using live social media data and intelligent forecasting.
- Integrated Graph API for social media data collection.
- Implemented machine learning and NLP pipelines for sentiment analysis, trend forecasting, and engagement-based popularity scoring.
- Built a FastAPI backend with asynchronous data flow, PostgreSQL integration, and autonomous AI agents for trend evaluation and auditing.
- Designed a multi-agent architecture combining OpenAI GPT-4o and Google Gemini APIs for insight generation, bias detection, and audit reporting.
- Enabled real-time AI responses through Server-Sent Events (SSE) and background task processing for continuous fashion monitoring.
- Focused on scalability, explainability, and ethical AI, ensuring transparent and balanced trend intelligence outcomes.

RetailIQ – Retail Analytics & Sales Prediction Platform

- Built an end-to-end predictive modeling system for retail sales forecasting using **LightGBM**, achieving strong performance with accuracy, MAE, RMSE, precision, recall, and F1 evaluation.
- Engineered a robust **data preprocessing pipeline** with automated cleaning, categorical encoding, temporal feature extraction, rolling-window metrics, and scaling.
- Implemented **customer segmentation** using **KMeans clustering**, generating actionable demographic & behavioral insights.
- Designed modular architecture with **Config**, **DataPreprocessor**, **ModelTrainer**, and **InsightsGenerator** classes, enabling easy extension and deployment.
- Integrated model persistence using **joblib**, including saving ML models, preprocessing pipelines, and cluster models.
- Delivered descriptive analytics (e.g., demographic trends, purchasing behavior, time-based patterns) and cluster-based customer insights for decision-making.

Supermarket Aisle Navigation System

- Developed inventory management dashboard as part of a full stack supermarket system using MERN stack.
- Enabled smooth tracking and control of product data for managers.
- Collaborated with teammates on backend API design and front-end integration.

ASCII Art Website

- Built a live webcam feed that converts real-time video into ASCII characters using HTML, CSS and JS.
- Users could also upload images and get ASCII-converted outputs.
- This project won 1st place at SynthArt Synergy 2024 (SLIIT Kandy Uni).

Finance Tracker Mobile App

- Built a finance tracker mobile application using Kotlin.
- Users can log by entering passcode, can add their expenses and incomes, can set budget for a month and, can change the passcode.
- App will generate statistics and notifications daily reminders and exceed budget.

Skills

- **Machine Learning & Data Science:** Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, NLTK
- **Programming & Scripting Languages:** Python, Java, SQL, JavaScript, Kotlin, R
- **Data Structures and Algorithms**
- **Cloud Platforms:** AWS, Azure
- **Web Development:** Spring Boot, React.js, Node.js, Express.js, Next.js, HTML, CSS
- **Cloud & DevOps:** Docker, Kubernetes, Git
- **Big Data:** Hadoop, Spark
- **Tools and Platforms:** Git, GitHub, IntelliJ, PyCharm, VS Code, ClickUp, Figma, Android Studio.

Certificates

Python for Beginners – University of Moratuwa, Sri Lanka.

AWS SimuLearn - Cloud Practitioner – Amazon Web Services (AWS).

Data Engineering on AWS – Foundations - Amazon Web Services (AWS).

Achievements

- **Finalist (Ranked 14th) & Top 25 Selection - SLIITXtream 4.0, IEEEXtreme Hackathon 2025**

Recognized for strong problem-solving and competitive programming performance among university teams.

- **Overall Winner — Sythart Synergy 2024 (SLIIT Kandy)**

Awarded first place for developing an innovative ASCII Art Live Video-to-Feed Website and ASCII art generator.

- **Dean's List – SLIIT (Awarded Twice – Y2S1 and Y1S1)**

Recognized for outstanding academic performance and maintaining a high GPA.

Education

BSc (Hons) in Information Technology Specialize in Data Science (Reading)

SLIIT (2023 – Present)

CGPA: 3.58

G.C.E(A/L) Examination (2021)

Walala A. Rathnayake Central College (2017 – 2019)

- Physics: C
- Chemistry: C
- Combined Mathematics: S

REFERENCES

Dr. Janaka Alawatugoda

Senior Lecturer, Department of Computing

SLIIT | Kandy Uni

Janaka.a@kandyuni.lk

Mrs. J.W.E.W. De Silva

Lecturer, Department of Computing

SLIIT | Kandy Uni

erandi.d@sliit.lk