

Rivindu Ashinsa

Computer Science Undergraduate

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Professional Summary

Computer Science undergraduate with hands-on experience in data cleaning, analysis, and statistics. Proficient in Python, SQL, and data reporting with proven ability to support data-driven decision-making. Experienced in processing and analyzing large datasets, creating actionable insights, and building data pipelines. Strong analytical and problem-solving skills with expertise in statistical analysis and data interpretation.

Education

B.Sc. (Hons) Computer Science

Sep 2024 – Jun 2028

Informatics Institute of Technology (IIT)

(Expected)

Affiliated with University of Westminster, UK

- Study Areas: Machine Learning and Data Mining, Data Science, Algorithms and Data Structures, Database Systems, Artificial Intelligence, Computer Systems

Foundation in Information Technology

Sep 2023 – May 2024

Informatics Institute of Technology (IIT), Sri Lanka

- Grade : Distinction (Artificial Intelligence and Data Science Pathway)

Projects

CognivusLabs – Biomedical Research

2025 – Present |

University of Westminster SDGP

[CognivusLabs](#) 

- Developed a real-time ECG ML pipeline in Python/TensorFlow using Conv1D+LSTM on 15 s windows, processing 250 Hz sensor data resampled to 360 Hz for live anomaly inference.
- Built a multi-stage SpO forecasting system with 10 s, 30 s, and 60 s horizons, achieving 74.0% accuracy, 66.6% F1, 68.7% F2, and 76.4% AUC (medium model).
- Implemented continuous SpO monitoring with 2 s inference intervals and a 180-entry rolling prediction history to power real-time trend alerts and clinical dashboard updates.

AI HR Multi-Agent Orchestration System

2026 | [GitHub](#) 

- Built a LangGraph + FastAPI multi-agent HR system with orchestrator-based routing to specialized agents
- Designed a two-tier memory system (STM/LTM) with SQLite and retrieval-augmented prompt injection for contextual responses
- Built intent classification with confidence scoring, rule-based routing, and an append-only audit logging system with REST APIs for request, memory, audit, and health management

Dementia Risk Prediction Research and Development

2025 | [GitHub](#) 

XPredators

- Built an end-to-end dementia risk prediction pipeline on 195K records and 1,024 features using Python and scikit-learn, from data ingestion and preprocessing to model evaluation.
- Reduced features using variance/correlation filtering and PCA (30 components).
- Chose Logistic Regression after benchmarking, reaching 0.99 accuracy and 0.99 weighted F1.

AI-Powered Website Audit Tool

2026 | [GitHub](#) 

- Shipped 2-service architecture (FastAPI + static frontend) with 3 production API endpoints
- Computed 12 deterministic SEO/UX metrics per URL before LLM analysis and recommendations
- Logged 4 AI trace artifacts per run across 6+ audit sessions for reproducible outputs

Key Achievements

- **IntelliHack 5.0 (Organized by IEEE UCSC):** Top 10 Finalist(Team: OutlierRejects)
- **DataStorm 6.0 Powered by Octave (Organized by UoC & UoM):** Top 10 finalist (Team: DeepCell)
- **SDGP Project:** Developed biomedical pipeline for CognivusLabs (University of Westminster)
- **Academic Excellence:** Achieved 9 A grades in GCE Ordinary Level Examination

Skills

Programming Languages: Python, R(Beginner), Java, SQL (MySQL, MariaDB), HTML, CSS

Machine Learning & Deep Learning: TensorFlow, Keras, scikit-learn, Transformers(Gen AI),CNN, LSTM, LangChain, LangGraph, OpenAI API, PyTorch(Beginner), Hugging Face, RAG

Data Analysis & Visualization: Pandas, NumPy, Matplotlib, Seaborn, Power BI (Beginner)

Tools & Platforms: Git, GitHub, Jupyter Notebook, VS Code, Docker (Beginner), Streamlit, Linux, AWS (Basic), Postman

Concepts & Methodologies: Supervised/Unsupervised Learning, Time-Series Analysis, Natural Language Processing (NLP), Statistics, Hypothesis Testing, MLOps, Feature Engineering, Model Deployment, Agile Project Management, Computer Vision, REST APIs

Certifications

- DataCamp Certification: Data Scientist Associate
- IBM CognitiveClass.ai: Data Analysis with Python, Python for Data Science
- Microsoft Learn: Fundamentals of Machine Learning, AI Concepts, Git & Version Control, Azure AI Fundamentals
- FreeCodeCamp: Data Analysis with Python
- Kaggle: Data Cleaning, Pandas, Data Visualization, Intro to Machine Learning, Intermediate Machine Learning, Deep Learning, Computer Vision, SQL
- LinkedIn Learning: Data Science Fundamentals, MLOps Essentials, Applied Machine Learning, AI Foundations
- Google: Machine Learning Crash Course

References

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