

# Samoda De Silva

Final Year Data Science Undergraduate at General Sir John Kotelawala Defence University | Data Science Intern | Member of KDU Toastmasters Club (District 82)

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## Career Summary

I am a passionate and results-oriented Data Science internship seeker with a strong ability to apply analytical thinking and technical expertise to solve complex problems and deliver actionable insights. My diverse skill set spans data analysis, programming, and business understanding, enabling me to bridge the gap between technical solutions and organizational needs.

## Professional Skills

- **Data Science & Analytics:** SQL, Azure SQL, Python, R, Power BI, Financial data analysis (Accounting and Auditing Principles), Advanced Excel for data cleaning and analysis
- **Programming & Development:** Java, CSS, Ballerina (Integration and Service-oriented Applications)
- **Research & Problem Solving:** Strong analytical and problem-solving skills
- **Visualization & Reporting:** Power BI dashboards and insights, Excel, Word, PowerPoint for reporting and presentations
- **Communication & Collaboration:** Public Speaking, Clear written and verbal communication, Effective cross-team collaboration
- **Tools:** Pieces

## Education

**General Sir John Kotelawala Defence University, Sri Lanka** 2024 – 2026  
Bachelor of Applied Data Science and Communication (Undergraduate) - In the dean list 2024

**Sri Lanka Economics and Finance Olympiad (SLEFO)** 2023 – 2023  
Selected to Final Top 20

**AAT Sri Lanka** 2021 – 2023  
Diploma in Accounting & Business  
(Passed: Finalist)

**Sri Sumangala Girls School, Panadura** 2009 – 2022  
GCE A/L - Combination Subjects (Accounting - B, Economics - C, Combined Mathematics - S)  
Language : English Medium

**University of Cambridge, UK**  
Cambridge ESOL Entry Level Certificate in ESOL International (Entry 1): 2013 – 2014  
Council Europe Level A1  
ESOL Examinations, Cambridge Young Learners (STARTERS, MOVERS, FLYERS) 2011 – 2012

## Achievements & Certifications

**AI and Data Science Club, General Sir John Kotelawala Defence University**  
Achieved 1st Runner Up (Team : NeuroBloom) - Data Odyssey 2025

**AI and Data Science Club, General Sir John Kotelawala Defence University**  
Selected to 2nd Round( Team: Byte- Seekers) -Data Odyssey 2024

## **Toastmasters International**

Level 1, 2 Completion, Reading Level 3, 8706- Dynamic Leadership

2024 – Present

## **Microsoft**

Reading DP 900 - Microsoft Certified: Data Fundamentals

2025 – Present

## **Projects**

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### **”Akuru Mithura” – Sinhala Voice-to-Text & Grammar Feedback Assistant**

Designed and developed ”Akuru Mithura”, a Sinhala voice-to-text and grammar feedback web platform for dysgraphia students in Sri Lanka, featuring learning games, activities, FAQs, feedback modules, and separate student and teacher login systems. Evaluated speech recognition and grammar feedback accuracy using real user inputs to assess system reliability and educational effectiveness.

- Source Code

### **Eco AI Agent – Sustainable Carbon Footprint Calculator (Ballerina)**

Developed an Eco AI Agent using Ballerina, delivering accurate carbon footprint calculations and environmental impact analysis through a high-performance RESTful API. Implemented a responsive web interface with real-time analytics and modular architecture to ensure scalability and maintainability.

- Source Code

### **RL-Powered Hotel Recommendation System**

Built an intelligent hotel recommendation system using a Reinforcement Learning Q-Learning agent to optimize personalized recommendations based on user interactions. Improved recommendation relevance by continuously updating reward policies through dynamic learning cycles.

### **UK Managed Migration Data Analysis (Azure SQL & Power BI)**

Performed data ingestion, cleaning, and transformation using Azure SQL Database on UK Managed Migration datasets. Developed advanced Power BI dashboards to visualize migration trends and support data-driven policy insights.

### **Energy Performance Trends in Manchester**

Analyzed energy performance trends of Manchester’s local authorities from 2014 to 2024 using advanced SQL queries. Created interactive Power BI visualizations to identify efficiency improvements and sustainability gaps.

### **UN Sustainable Development Goals (SDG) Data Analysis**

Conducted advanced SQL-based data ingestion and analysis using datasets from the UN SDG Data Repository. Designed insightful Power BI dashboards to monitor global sustainability indicators and development progress.

### **UK Public Sector Data Mining using R**

Applied classification and clustering techniques in R to uncover patterns and insights within UK public sector datasets. Evaluated model performance to support data-driven public service optimization.

### **Association Rule Mining – UK Council Spending Dataset**

Implemented Association Rule Mining using R to identify spending patterns and relationships within UK council expenditure data. Generated actionable insights to support financial transparency and decision-making.

### **Logistic Regression – London Fire Brigade Incident Records**

Applied Logistic Regression using Python on London Fire Brigade incident datasets to predict incident outcomes. Assessed model accuracy using confusion matrices and performance metrics.

### **Plotly Dashboard – UK Council Spending (R)**

Developed an interactive Plotly dashboard in R to visualize UK council spending trends. Enabled dynamic filtering and exploration to enhance stakeholder engagement.

Australian National Passenger Travel Analysis

Analyzed Australian national passenger travel data by transport mode using advanced SQL. Built Power BI dashboards to identify mobility trends and transport usage patterns.

Immigration & Employment Analysis – Canada

Analyzed immigration and employment datasets using advanced SQL and Power BI to identify job market opportunities for immigrants in Canada. Created data-driven insights to support strategic career planning.

## UK Property Sales Trend Analysis

Conducted a comprehensive analysis of UK property sales trends, performance, and regional distribution using SQL and Power BI. Delivered interactive visualizations highlighting market growth and investment hotspots.

Crime Analysis & Insights (SQL & Power BI)

Performed comprehensive crime data analysis using advanced SQL queries to uncover temporal and regional crime patterns. Developed Power BI dashboards to support evidence-based policy and safety strategies.

## Community Involvement

Secretary, AI and Data Science Club, General Sir John Kotelawala Defence University	2025 – 2026
Co - Social Media Analyst, AI and Data Science Club, KDU	2024 – 2025
Standing Committee Member Social and Reception Committee, KDU Toastmasters Club	2024 – 2025
Senior and Junior Prefect, Sri Sumangala Girls School	2017 – 2021

## **Extra Curricular Activities**



## Bhatkhande Sangit Vidyapith, Lucknow, India

## Publications

- Design and Evaluation of a Sinhala Voice to text and Grammar Feedback Assistant for Dysgraphia Students.
  - Design a Feature based Reinforcement Learning Agent for Hotel Selection in Sri Lanka - A pilot study using 2025 Tourist Data.

## References

Available upon request.