SANDRA KS

+91 9562876334 ◇ Coimbatore, India
sandrakaveesher@gmail.com ◇ www.linkedin.com/in/sandrasmithakaveesher ◇ github.com/kssandraeshwar

SUMMARY

An Integrated MSc in Data Science student (4th year) with practical hands-on internship experience in data analysis, machine learning, and visualization . Background in AI,ML, deep learning, and statistical modeling, with a developing interest in data-driven research and public policy. With expertise in end-to-end projects involving data preprocessing, predictive modeling, and analytical storytelling, I am passionate about creating intelligent, moral, and significant machine learning solutions. A research-driven problem solver who enjoys in turning intricate datasets into useful insights..

EDUCATION

Integrated Msc in Data Science, Amrita Vishwa Vidyapeetham — Expected 2027
Ongoing

Higher Secondary Education, Christ Nagar School — 2019 - 2021
Grade: 87.4
Relevant Coursework: Physics, Chemistry, Mathematics, Biology.

Higher School Education, Christ Nagar School — 2019
Grade: 91.8

SKILLS

Technical Skills	Python, SQL, Matlab, Java(Basic), R
Soft Skills	Leadership, Teamwork, Communication, Research
Frameworks	Pandas, Numpy, Networkx, scikit-learn, Matplotlib, seaborn
Tools	My SQL, MS Excel
Platforms	Google Colab, Jupyter Notebook, VS Studio, Oracle Live SQL, Postgresql, Net beans

EXPERIENCE

Research Intern — Apr 2025 - Jun 2025
Digital University, Kerala — *Thiruvananthapuram, Kerala, India*

Worked on machine learning classification research with a focus on graph-based modelling for acoustic signal processing. Conducted an extensive literature review on Graph Neural Network (GNN) applications in this domain and constructed graph representations using signal-derived node features. Implemented multiple GNN architectures and evaluated their performance across key metrics to compare model effectiveness and identify the best-performing approaches.

CERTIFICATIONS

- **Fundamentals of Reinforcement Learning**
  Provider: Coursera
  Format: Online, Non-Credit Specialization
- **Google Cloud Generative AI Learning Path Certification**
  Provider: Google Cloud Training Coursera
  Format: Online, Non-Credit Specialization
  Duration: 4-Course Comprehensive Program
- **Data Analysis for Biologists**
  Provider: NPTEL
  Marks: Consolidated score of 77%

Format: Online, Non-Credit Certification
Duration: 8-Week Certificate Program

- **Python Data Structures**
  Issued by Great Learning
- **Emerging Data Science Technologies and Industry**
  Workshop conducted by Amrita Vishwa Vidyapeetham
- **Introduction to Artificial Intelligence**
  Issued by Great Learning

PROJECTS

Human-Opponent-Modelling-in-Rock-Paper-Scissors.

Rock, Paper, Scissors with Gesture Control and Adaptive Reinforcement Learning created an interactive role-playing game that makes use of an adaptive RL agent that picks up on human play patterns and real-time hand gesture recognition through MediaPipe. With the help of a Tkinter/OpenCV interface, the system combines Q-learning, opponent modeling, and Markov-style behavior prediction to predict player moves. In order to illustrate human-AI interaction and adaptive strategy learning, real-time performance graphs show the agent's learning progress, win rates, and decision patterns.(GITHUB)

Improving-crop-production-using-an-agro-deep-learning-framework.

This project implements a simplified Agro-Deep Learning Framework (ADLF) for crop yield prediction using multi-source agricultural data. The model integrates: Weather features Soil parameters Satellite vegetation index (NDVI) Crop type information Environmental/tabular features The project is inspired by the research paper: "Improving Crop Production Using an Agro-Deep Learning Framework in Precision Agriculture" but implemented using publicly available Kaggle datasets and a custom multi-branch neural architecture. Objective To design a multi-input deep learning model capable of learning from diverse agricultural data sources and improving yield prediction accuracy compared to traditional ML approaches. (GITHUB)

Digital-Library.

A full-stack Java Web Application for managing a digital library system using Servlets, JSP, PostgreSQL, and MVC architecture. Features include user authentication, admin dashboard, book management, borrowing system, and role-based access. Designed as a scalable and secure academic project. (GITHUB)

Discipline-wise-Outcome-Satisfaction-Analyzer

AI Assistant Usage Analysis in Student Life is a data-driven study that examines more than 10,000 student-AI interaction records from various academic fields. To determine satisfaction levels across tasks like coding, studying, and writing, exploratory analysis, statistical testing (ANOVA, Tukey HSD), and visualization were used. The results demonstrated the wide range of applications of AI assistants, with no discernible differences in satisfaction across disciplines. created a Random Forest classifier to predict whether students would use the assistant again. The most significant factors were found to be Satisfaction Rating, Session Length, and Final Outcome. provided actionable knowledge for the use of AI tools in academic settings through lucid visualizations and feature importance analysis. (GITHUB)

North Indian Ocean Cyclogenesis Analysis and Prediction System

Forecasting Cyclone Activity in the North Indian Ocean In order to find trends, patterns, and risk factors connected to cyclonic activity in the NIO region, a machine learning and data science project examined past meteorological data. created a predictive machine learning model to predict cyclonic events and performed exploratory analysis on long-term cyclone records. The project provides data-driven insights that can enhance disaster preparedness and early warning systems.(GITHUB)

Parkinson's UPDRS Prediction using Machine Learning

Parkinson's Disease Progression Prediction: Using clinical and biological characteristics, multiple regression models were created and assessed to forecast the course of Parkinson's disease. used MAE, MSE, and R2 scores for feature preprocessing, model comparison, and performance assessment. built reliable predictive pipelines that support early detection and clinical decision-making by utilizing machine learning libraries like Pandas, Scikit-Learn, and XGBoost.(GITHUB)

Crop Production Dashboard (1997–2017)

Agricultural Production Visualization Dashboard: This interactive Jupyter Notebook data visualization project examines agricultural production trends by district, crop, and season throughout Indian states. To find trends in crop yield across regions and time periods, exploratory analysis was carried out and dynamic visualizations were produced. Using interactive charts and analytics, the project offers lucid, data-driven insights into agricultural variability.(GITHUB)

Gold-Price-Forecast

Forecasting Gold Prices with ML, DL, and Time-Series Models created a thorough forecasting system that uses statistical models (ARIMA, Prophet), machine learning (XGBoost, Random Forest), and deep learning (LSTM) to predict future gold (GLD) prices. used external economic indicators like stock indices, oil prices, silver trends, and forex rates in both univariate and multivariate experiments. A multivariate LSTM model produced the best results, exhibiting a high degree of predictive power for financial time-series forecasting. (GITHUB)

EXTRA-CURRICULAR ACTIVITIES

- Journaling, Blogging, Reading

LEADERSHIP

- Currently Working as the Head of Internal Communications at SVAASTIKA, an NGO absed in Trivandrum, Kerala.
- served as the head of "Dhwani", the malayalam wing of Srishti, the Literary club of Amrita Vishwa Vidyapeetham, Coimbatore Campus.