Lasantha Kulasooriya

Data Scientist
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Summary

I am a dedicated professional with a BSc (Hons) degree in Data Science, with over a year of experience in the insurance sector, computer vision, and robotics. I specialize in leveraging data-driven solutions to optimize decision-making and drive innovation. With expertise in developing advanced machine learning and deep learning models, I excel at analyzing structured and unstructured data, including images, audio, video, and time series data. I am proficient in data querying, manipulation, and visualization, as well as statistical modeling and predictive analytics. As an AI/ML blogger, I actively explore and explain core machine learning concepts while staying updated with emerging technologies and industry advancements. My strong problem-solving skills, combined with the ability to communicate complex insights to both technical and non-technical stakeholders, enable me to contribute effectively to cross-functional teams. I am now seeking an opportunity to apply my technical expertise and passion for innovation in a challenging and growth-oriented role.

Technology Proficiency

Languages: Python, R, Java, PySpark, C, HTML, SQL, CSS, JavaScript
Frameworks & Libraries: Scikit-learn, TensorFlow, Keras, PyTorch, LangChain, Numpy, Pandas, nltk, Plotly, Matplotlib, Seaborn, Scipy, Selenium, Streamlit, Librosa, pyaudio, wave, rospy, supervision, OpenCV
Developer Tools: Git, Docker
Databases: MySQL, Oracle SQL, MongoDB, Redis, Neo4j, Pinecone
BI Tools: Power BI
Cloud Technologies: AWS

Experience

Intern Data Science and AI Engineer — Jan 2024 - Jun 2024
Janashakthi Insurance — *Colombo, Sri Lanka*

Associate Data Science and AI Engineer — Jul 2024 - Oct 2024
Janashakthi Insurance — *Colombo, Sri Lanka*

Data Scientist — Oct 2024 - Present
Hype Invention — *Colombo, Sri Lanka*

AI/ML Blogger — Jul 2024 - Present
Medium — *Remote*

Education

University of Peradeniya — Peradeniya, Sri Lanka
BSc (Hons) in Data Science, Faculty of Science — GPA: 3.66 — *2019 - 2024*

St. Anthony's Boy's College — Kandy, Sri Lanka
Secondary and Advanced Level Education — *2008 - 2016*

Certifications

Deep Learning Specialization (5 certificates) - Coursera — *Issued Aug 2024*

Introducing Generative AI with AWS - Udacity — *Issued Aug 2024*

Applied Data Science Module - WorldQuant University — *Issued Jul 2024*

AI/ML Engineer (Stage 2) - SLIIT — *Issued Aug 2023*

Computer Vision with Python - Udemy — *Issued Nov 2023*

Mastering Data Visualization with R - Udemy — *Issued Oct 2022*

Introduction to Generative AI - Google — *Issued Jan 2024*

Projects

AI-Based Real-Time Football Analysis Project

- This project detects players, referees, goalkeepers, and the ball in real-time, tracking them across the field. It identifies keypoints, field lines, and player jersey colors, while tracking camera movement. The system projects this data on a football field map, calculates team ball control, and measures player movement speed, offering detailed performance metrics.

Real-Time Scene Understanding Model Using the Florence2 Model

- This project is designed for deployment on an autonomous robot that understands scenes and captures important moments using a camera. The system utilizes Florence 2 VLM to analyze the environment, and based on the detected scene, it controls the camera and gimbal to capture aesthetically pleasing photos.

Real-Time Human Detection and Distance Calculation to Navigate a Robot for Optimal Position

- This project utilizes an RGB + depth camera setup. The RGB image detects humans, while the depth image calculates their distance from the camera. The detected humans are clustered, and the optimal navigation point is determined based on their distance and the number of people within the camera's field of view, enabling efficient robot navigation.

Customer Segmentation Using Cluster Analysis for Amazon Sales Data with Dashboard

- This project segments customers based on demographic, geographic, and behavioral attributes using various clustering techniques such as k-means, K-Mode, Gaussian Mixture, Agglomerative, and K-prototype clustering. A dashboard was developed to visualize the identified customer segments.

AI-Powered Insurance Recommendation System

- This project is developed to help insurance agents recommend insurance policies to clients by personalizing their requirements based on their personal portfolios.

Insurance Claim Prediction Model

- This project estimates the claim amount of a policyholder during the policy period based on their personal portfolios.

Speech Emotion Recognition Using Deep CNN Model

- This project recognizes human emotions and affective states from speech, capitalizing on the fact that voice often reflects underlying emotion through tone and pitch.

A Deforestation Model Using Satellite Images

- This project identifies deforestation in the Horowpathana National Park using satellite images taken by the Landsat 8 satellite.

Employee Attrition Model with Performance Analysis

- This project predicts whether a valuable employee will leave and gains insights regarding employee performance and their likelihood to stay or depart from the organization based on employee data.

Advanced Statistical Analysis Projects Using R

- Various projects developed, such as canonical correlation analysis, principal component analysis, factor analysis, multivariate data analysis, etc., using the R programming language.

References

Prof. Roshan D. Yapa
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I hereby certify that the above information is true and correct to the best of my knowledge.

22.01.2025

Lasantha Kulasooriya