SHREE RUTHI RAKSHANA R

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shreeruthirakshana

PROFILE

Passionate and creative machine learning engineer seeking to elevate skills and make impactful contributions. Committed to driving innovation and achieving results through collaboration and competence.

WORK EXPERIENCE

Machine Learning Engineer, *Optisol Business Solutions* 06/2025 – 01/2026
Coimbatore, India

- Built an MCP server enabling structured LLM tool calling and multi-step agent workflows.
- Designed tool schemas, validation pipelines, and execution control for reliable agent orchestration.
- Conducted load testing on vLLM inference servers to benchmark latency, throughput, and token/sec performance.

Machine Learning Engineer Intern, *Optisol Business Solutions* 12/2024 – 05/2025
Coimbatore, India

- Developed an AI-powered RFQ system to generate structured guidance drafts using LLM-based orchestration.
- Automated compliance matrix creation and analytical chart generation for proposal reporting.
- Implemented Grafana monitoring and Sentry error tracking

Software Engineering Intern, *Smartail Private Limited* 05/2023 – 11/2023
Chennai, India

- Developed a responsive interface using Angular for Report Card Template Generation.
- Developed a subjective Grading System with the help of NLP using Python.
- Performed Image Annotation for Question Number Extraction.

EDUCATION

MSc Integrated: Artificial Intelligence and Machine Learning, 2020 – Present
Coimbatore Institute of Technology Coimbatore, India
CGPA:9.18

HSC, *Nachiar Vidyalayam Matric Hr Sec School* 2019 – 2020
88.5% Pollachi, India

SSLC, *Nachiar Vidyalayam Matric Hr Sec School* 2017 – 2018
96.2% Pollachi, India

SKILLS

Programming Languages
Python, C, MySQL, Java (Beginner)

Model Approach
Deep Learning,Supervised and Unsupervised Learning, ANN, CNN.

Language
English, Tamil, Telugu, Hindi (Elementary Level)

Data Analysis
Image Pre-Processing, Data Cleaning and Data Visualization

Web Development
HTML, CSS, Typescript

AREA OF INTEREST

- MACHINE LEARNING
- DEEP LEARNING
- FRONT END DEVELOPMENT
- REINFORCEMENT LEARNING
- DBMS
- Agentic AI

PROJECTS

BREAST CANCER DETECTION
- Implemented a Deep Learning model that predicts breast cancer at early stage and the model is trained using All- Mias dataset.
- The model has been constructed using Convolutional Neural Network (CNN) methodology.
- The model has been deployed using the Streamlit framework.
- The model has achieved an impressive accuracy rate of 96%.

GOLD PRICE PREDICTION
- A simple project to predict gold price and the model is trained using Gold Price Prediction Dataset.
- The model has been constructed using the Random Forest Regressor algorithm.
- The model has been deployed using the Streamlit framework.
- Compared to a linear regression model, the model has shown improved accuracy with a 98% rate, achieved through the use of a Random Forest Regressor.

ACTION DETECTION
- Implemented a Deep Learning model that predicts signed or unsigned, and the model is trained using real-time dataset.
- The model was constructed with Convolutional Neural Networks, utilizing the Keras and TensorFlow libraries.
- The model has been deployed using the Streamlit framework.
- The model has achieved an accuracy rate of 94%.

RESEARCH PUBLICATIONS

2nd Virtual National Conference on Mathematical Modelling and Computation 01/12/2020