

# SHREE RUTHI RAKSHANA R

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## PROFILE

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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

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**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

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**MSc Integrated: Artificial Intelligence and Machine Learning,** 2020 – Present  
*Coimbatore Institute of Technology* Coimbatore, India  
CGPA:9.12

**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

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### 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

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

## PROJECTS

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### 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

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2nd Virtual National Conference on Mathematical Modelling and Computation

01/12/2020