

# Vattela Ramesh

## Machine Learning & Data Analysis

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Hyderabad, Telangana | https://github.com/ramesh6762

## SUMMARY

I am a dedicated Computer Science Engineering graduate with a focus on Machine learning and Data Analysis boosting hands-on experience in machine learning, deep learning, and 3D computer vision. My expertise lies in crafting robust AI pipelines and conducting thorough data analyses. I am passionate about leveraging advanced algorithms to address complex challenges and am keen to contribute my Technical and analytical skills to innovative AI projects

## EXPERIENCE

### Machine Learning Developer

Roboclick Infotech private limited

02/2025 - 07/2025 Hyderabad, Telangana

A company focused on innovative solutions in technology

- Engineered a data augmentation pipeline for 3D point cloud datasets, applying random geometric transformations and normalization to improve model generalization and training efficiency.
- Collaborated with cross-functional engineering teams to integrate augmented datasets into deep learning pipelines, enhancing model training and performance.

### Data Analyst Intern

Kalwings Technologies

09/2024 - 11/2024 Hyderabad, Telangana

A technology company specializing in data-driven analytics

- Implemented customer segmentation using K-means, Elbow Method, and Agglomerative Clustering to analyze purchasing behavior
- Identified actionable customer groups, enabling targeted marketing strategies and improved customer engagement

## EDUCATION

### B.Tech in C.S.E (Data Science)

Hyderabad Institute of Technology and Management

08/2021 - 05/2025 Hyderabad, Telangana

### Intermediate (M.P.C)

TS Model School School and Jr.College, Kodair

06/2019 - 05/2021 Nagarkurnool, Telangana

### SSC

TS Model School School, Kodair

06/2016 - 05/2019 Nagarkurnool, Telangana

## SKILLS

**Languages:** Python, SQL, C

**Machine Learning:** Regression, Classification, Clustering, Decision Tree, Model Evaluation, Feature Engineering, Model Deployment

**Computer Vision:** Image Classification, Object Detection (YOLO, SSD), Segmentation

**Data Analysis:** EDA, Descriptive Statistics, Inferential Statistics

**Visualization:** Matplotlib, Seaborn, Plotly, Power BI, Excel

**Tools & Frameworks:** Scikit-learn, Pandas, NumPy, SciPy, PyTorch, TensorFlow, Keras

**Databases:** SQL

**Data Platforms:** Jupyter, Google Colab, VS Code

## LANGUAGES

English

Hindi

## PROJECTS

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### Point Cloud Object Classification

📅 04/2025 - 07/2025

A project focusing on the classification of 3D objects from point cloud data

- Built a PointNet-based deep learning pipeline in Python and PyTorch to classify 3D objects from raw point cloud data
- Managed end-to-end preprocessing with Open3D, including voxel down sampling and outlier removal
- Trained classification models on multi-class datasets, and visualized results using 3D bounding boxes for model evaluation

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### GARVIS (GPT-Assisted Robotic Voice Interactive System)

📅 03/2025 - 05/2025

Created a voice assistant leveraging advanced AI capabilities

- Developed a GPT-integrated desktop voice assistant using Python, GPT API, and Speech Recognition
- Handled dynamic user queries, automated routine tasks, and provided personalized recommendations
- Incorporated speech-to-text and text-to-speech flows to create an intuitive conversational AI interface

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### Customer Segmentation

📅 09/2024 - 11/2024

A project focusing on customer segmentation for better marketing strategies

- Implemented unsupervised learning techniques, including K-means, Elbow Method, and Agglomerative Clustering
- Analyzed purchasing patterns to derive actionable customer clusters, improving targeting strategies and marketing ROI

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### Predictive Maintenance of IIoT

📅 04/2024 - 07/2024

A project aimed at predicting maintenance needs in industrial applications

- Designed machine learning models in Python and Jupyter to predict equipment failures in Industrial IoT systems
- Applied time-series analysis and classification techniques to historical sensor data

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### P&ID Symbol Detection Using YOLOv8

📅 07/2025

A project focused on automating symbol recognition in engineering diagrams

- Developed a YOLOv8-based deep learning model in Python to detect and classify Piping and Instrumentation Diagram (P&ID) symbols.
- Deployed the model for real-time identification and localization of engineering symbols to streamline documentation and validation.

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### Text Extraction Using EasyOCR and Streamlit

📅 06/2025

A project for intelligent document processing with a simple web interface

- Built an OCR pipeline using EasyOCR to extract multilingual text from images and PDFs with high accuracy.
- Developed a Streamlit-based web interface with image preprocessing and auto-resizing for real-time text extraction and visualization.

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## VOLUNTEERING

### Coordinator of Current Affairs and Defense Club (CAD)

📅 11/2023 - 09/2024

◦ Led and organized discussions and events on current affairs and defense topics, fostering awareness, critical thinking, and active engagement among members.

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### Volunteer at Sahaya Organization

📅 07/2022 - 02/2023

◦ Provided academic support and subject-wise tutoring to school students, contributing to their learning progress and overall educational development

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## INTERESTS

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Converting chaotic data into clear, actionable insights  
Visualizing complex data for clarity and impact  
Exploring patterns to unlock hidden stories in data