

# R.Sarath Kumar

🌐 Portfolio

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📄 Github

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📍 Bengaluru, Karnataka.

## PROFILE

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**Machine Learning Engineer skilled in developing and deploying AI/ML solutions, optimizing models, and automating workflows using Python. Proficient in machine learning ,NLP with a focus on solving complex problems and driving business impact.**

## WORK EXPERIENCE

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### Machine Learning Intern

Feb 2024 - Present

*Antern*

- Developed and deployed machine learning models for natural language processing (NLP) and machine learning , improving accuracy by 20%.
- Researched and implemented state-of-the-art deep learning algorithms, including Transformers and CNN-based models for multi-model applications.
- Built end-to-end ML pipelines using Python and libraries like Scikit-learn, TensorFlow, and PyTorch.
- Conducted rigorous testing and validation of ML models, ensuring production-grade performance.
- Collaborated with interdisciplinary teams to streamline ML model integration with production systems.

## PROJECTS

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### 1.Automated Machine Learning Pipeline for Customer Churn Prediction : [Link](#)

- Built an end-to-end machine learning pipeline to predict customer churn using **ZenML** for modular and automated workflows.Integrated **MLflow** for experiment tracking, logging metrics, and managing model versions.
- Deployed the final model using **Docker**,**FastAPI** and **Huggingface** ensuring seamless integration into production environments.
- Achieved 92% accuracy, enabling actionable insights for improving customer retention strategies.Automated repetitive processes, reducing manual intervention by 70% and increasing system efficiency.

### 2. End-to-End Sentiment Analysis Using Pretrained Transformer Models [Link](#)

- Developed an end-to-end sentiment analysis solution using the **DistilBERT-cased** model for accurate text classification.Achieved 90% accuracy on benchmark datasets, offering a robust tool for analyzing sentiment across diverse text datasets.
- Automated the entire ML pipeline with ZenML, incorporating stages for data ingestion, preprocessing, training, and evaluation.Leveraged MLflow for comprehensive experiment tracking, hyperparameter tuning, and model versioning through model registry.
- Designed an interactive and user-friendly web UI using Streamlit to visualize predictions and insights in real time.Deployed the trained model on Hugging Face Spaces, utilizing Hugging Face Transformers for seamless deployment and scalability.

### 3. Automated Machine Learning Pipeline for House Price Prediction [Link](#)

- Designed and implemented an end-to-end pipeline for predicting house prices, integrating data ingestion, pre-processing, and model deployment using **ZenML**.

- Utilized **MLflow** for experiment tracking, hyperparameter optimization, and maintaining a model registry for streamlined lifecycle management.
- Deployed the predictive model as a web application, enabling real-time predictions and analysis for users.

## SKILLS

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**Core Skills:** Machine Learning, Deep Learning, Python, NLP, Computer Vision, Data Analysis, SQL, Data Engineering

**Frameworks and Libraries:** TensorFlow, PyTorch, Scikit-learn, Hugging Face, OpenCV

**Databases:** Elasticsearch, MongoDB, MySQL

**MLOPs :** ZenML, MLFlow, BentoML, Weight & Bias

**Tools:** Docker, Streamlit, Flask, FastAPI

## EDUCATION

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**IIT Madras**

June 2022 - Dec 2022

*Advanced Professional Master Program in Data Science*

**Shanmuga Industries Arts And Science College, Thiruvannamalai**

June 2022

*B.Sc. Biotechnology*

C.G.P.A — 8.5

## CERTIFICATION

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- **IIT Madras**  
Advanced Professional Master Program in Data Science
- **Guvi, Chennai**  
Python Full Stack

*June 2022 - Dec 2022*