# Karthik Raj

✉ karthikraj0024@gmail.com  📞 9895436554  📍 Pune  in karthikraj

## PROFILE

Motivated Data Science postgraduate specializing in Artificial Intelligence and Spatial Analytics. Proficient in Python, R, and SQL with practical experience in machine learning, computer vision, and data analytics. Skilled in developing deep learning and machine learning models and applying cloud-based analytics for scalable solutions. Passionate about leveraging AI and machine learning to deliver intelligent, data-driven systems that enhance decision-making and operational efficiency.

## EDUCATION

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|---|---|
| Jul 2024 – present<br>Pune | **MSc. Data Science and spatial Analytics**<br>*Symbiosis Institute of Geoinformatics* |
| Aug 2020 – May 2023<br>Bangalore | **BSc. (Computer Science, Mathematics and Statistics)**<br>*St. Josephs College(Autonomous)* |
| May 2020<br>Ernakulam | **PCMC**<br>*Vidyodaya School* |

## PROJECTS

**Jun 2025 – Aug 2025** — **Fracture and Implant Localization in Wrist X-rays Using Generative and Discriminative Deep Learning Approaches**
*Yolo ,GAN, Python*
- Implemented GAN-based inpainting and YOLOv8 detection pipelines on MURA & GRAZPEDWRI-DX datasets for automated fracture diagnosis.
- Implemented a custom data preprocessing and annotation pipeline, improving dataset quality and reducing class imbalance.
- Deployed a Streamlit application for real-time inference and visualization.

**Apr 2025** — **Enterprise Sales Analytics Pipeline** 🔗
*Azure, Databricks, PySpark, Power BI*
- Built a cloud-based ETL pipeline to process and analyze sales data.
- Automated data ingestion in Databricks and visualized KPIs via interactive Power BI dashboards.

**Mar 2025** — **UPI Fraud Detection using Machine Learning** 🔗
*K-Means, Gaussian Mixture Models*
- Developed clustering-based model to detect anomalous UPI transactions.
- Enhanced payment security by flagging potential fraud patterns.

**Mar 2025** — **Automated OMR Sheet Grading System** 🔗
*OpenCV , Python*
- Built image-processing pipeline to detect and evaluate OMR answer sheets.
- Implemented preprocessing, contour detection, and bubble-selection logic for accurate grading.

## SKILLS

**Technical Skills** — Python │ R │ SQL │ NoSQL │ OpenCV │ Numpy │ Pandas │ Scikit-learn │ Azure Cloud │ Power BI │ HTML │ CSS

**Analytical Skills** — Data Visualization │ Statistical Analysis and Problem Solving │ Data Management and ETL

## LANGUAGES

- English
- Hindi
- Malayalam