

# Abhijith P

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## TECHNICAL SKILLS

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**Languages:** Python, Java, JavaScript (ES6+), SQL (PostgreSQL)  
**Frameworks & Libraries:** React, Node.js, Express, Flask, FastAPI, Django, JUnit, Jest  
**Data Science & ML:** pandas, NumPy, Matplotlib, scikit-learn, TensorFlow, Keras, PyTorch  
**Developer Tools:** Git & GitHub, Docker, Postman, Google Cloud Platform, VS Code, PyCharm

## PROJECTS

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- Halo CME Detection Pipeline** | *Python, cdflib, netCDF4, Pandas, Matplotlib, Flask* July 2025 – Aug 2025
- Designed and implemented a Python pipeline to ingest and preprocess SWIS-ASPEX (BLK, TH1, TH2) and MAG (NetCDF) time-series from ISRO's Aditya-L1 for automated halo-CME detection.
  - Engineered multi-parameter feature extraction (integrated flux, density, temperature, velocity, total magnetic field) with centered rolling-window smoothing and gap interpolation to ensure high data fidelity.
  - Developed statistical anomaly detection using dynamic thresholding (flux mean +  $3\sigma$ ), achieving > 90% recall and < 10% false-alarm rate against the CACTus CME catalog.
  - Built end-to-end visualization modules using Matplotlib and a Flask + React dashboard, integrating interactive time-series plots and real-time alerting for ISRO Operations.
- Gym Management System** | *Python* May 2025 – July 2025
- Developed an interactive CLI-based Gym Management System in Python to register members, record workouts, and track progress with object-oriented design.
  - Implemented member CRUD operations with in-memory dictionaries and provided contextual prompts and validations to enhance user experience.
  - Built a workout logging module that captures muscle groups, activities, and durations, and stores session history for each member.
  - Designed dynamic messages and error handling to guide users through adding/removing members, recording workouts, and viewing workout histories.

## EXPERIENCE

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- Data Analyst Intern** July 2025 – Aug 2025  
*MedTourEasy* *New Delhi, India*
- Completed nine advanced modules in data preprocessing, SQL optimization, Python (Pandas/NumPy), R, and data visualization (Google Data Studio, Tableau), enhancing end-to-end analytical expertise.
  - Performed exploratory data analysis on user engagement metrics, identifying three key factors driving a 20% increase in platform retention.
  - Automated weekly KPI reports using Python scripts and SQL stored procedures, reducing manual reporting effort by 60% and improving accuracy.
  - Led a capstone analysis of left- vs. right-handed age distributions using Bayesian methods in Python, visualizing conditional probabilities and uncovering demographic insights.

## CERTIFICATIONS

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- IBM Professional Certificate in Python for Data Science, AI & Development, Coursera, 2024
- Meta Professional Certificate in Programming with JavaScript, Coursera, 2025
- Oracle AI Foundations Associate, Oracle University, 2024
- Google Data Analytics Professional Certificate, Coursera, 2025

## EDUCATION

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### JCT College of Engineering and Technology

*Bachelor of Engineering in Computer Science: 85%*

Coimbatore, TN

*Nov. 2022 – May 2026*

### Bhavan's Vidya Mandir Chithali

*PCMB (Physics, Chemistry, Mathematics, Biology): 83.8%*

Palakkad, KL

*June 2021 – July 2022*