

Irfan PJ

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SUMMARY

I am a passionate and driven **AI & Data Science student** with a strong foundation in programming, machine learning, and data-driven problem solving. I thrive in both individual and collaborative projects, applying logical thinking and analytical skills to build efficient and scalable solutions. My adaptability, time management, and eagerness to learn new technologies make me an asset to any team.

TECHNICAL SKILLS

Programming Languages:

- Python, C, Java, C++, SQL, HTML

AI & Machine Learning:

- **Machine Learning:** Scikit-learn, TensorFlow, PyTorch
- **Deep Learning:** Keras, OpenCV, YOLO
- **Natural Language Processing:** NLTK, Hugging Face Transformers
- **AI Agent Building:** CrewAI, OpenAI API, LLM-based agents, Prompt Engineering, API Key Integration

Data Science & Analytics:

- **Data Visualization:** Matplotlib, Seaborn
- **Data Manipulation:** Pandas, NumPy

Software Development & Tools:

- **API Development:** Flask, FastAPI
- **Database Management:** MySQL, SQLite, MongoDB
- **Cloud Platforms:** AWS, Google Cloud
- **Version Control & Project Tools:** Git, GitHub, Jira

PROJECTS

TAPACD (Theater Anti-Piracy AI Camera Detection)

Computer Vision Project

Python, YOLOv5, Flask, OpenCV

- Developed an AI-powered system to detect unauthorized phone cameras in theaters.
- Utilized YOLOv5 for real-time object detection and tracking of recording devices.
- Implemented a Flask-based backend to process live camera feeds and log detections.
- Designed a frontend interface for monitoring detection alerts and logs.

Website Auditor AI Agent

AI Project

Python, CrewAI, BeautifulSoup, Requests, CSSutils

- Built an autonomous web auditing agent using the CrewAI framework and its built-in scraping tools.
- Extracted HTML and CSS using CrewAI agents with BeautifulSoup and Requests integration.
- Analyzed structure, styling, and accessibility to detect web reliability issues.
- Generated structured audit reports with improvement suggestions saved as Markdown (.md) files.
- Designed the system to run autonomously on any target URL and produce lightweight developer-friendly outputs.

Multifunctional Data Science Toolkit

- Data Science Project*
- Python, Pandas, Scikit-learn, Matplotlib, Seaborn*
- Built a unified platform combining student performance analysis, house price prediction, and a movie recommender system.
 - Analyzed academic data to identify grade-impacting factors using EDA and visualization techniques.
 - Trained a regression model to predict house prices based on location, size, and other features.
 - Developed a content-based movie recommender using TF-IDF and cosine similarity for top-5 suggestions.

AI Dungeon Story Generator

- Interactive Web App*
- Python, Hugging Face Transformers (GPT-Neo2), Streamlit*
- Integrated GPT-Neo2 model for dynamic story generation based on user prompts.
 - Developed a Streamlit interface to capture player choices and display evolving narratives.
 - Maintained conversation context across turns to enable coherent multi-step adventures.
 - Implemented branching logic that adapts story paths according to user decisions.
 - Deployed the app as a shareable web service for real-time interactive storytelling.

Restaurant Data Analysis and Machine Learning

- Machine Learning and Data Science Project*
- Python, Scikit-learn, Pandas, NumPy, Flask, Matplotlib, Geopandas*
- Built models for rating prediction, recommendation, cuisine classification, and location analysis.
 - Developed regression models for rating prediction using Linear Regression and Decision Tree.
 - Implemented a content-based recommendation system for personalized restaurant suggestions.
 - Trained classification models for cuisine identification, evaluated using precision, recall, and accuracy.
 - Performed geographical analysis of restaurant distributions and extracted insights on regional trends.

Kanban Board Stock Management

- Machine Learning Project*
- Python, LSTM, TensorFlow, Flask, React*
- Developed an AI-powered Kanban Board for stock management using LSTM neural networks.
 - Implemented a time-series forecasting model using LSTM to predict stock fluctuations.
 - Integrated a Flask-based API to handle model inference and serve predictions.
 - Built an interactive frontend using React to visualize stock trends and alerts dynamically.
 - Used TensorFlow and Keras for LSTM model training and optimization.

EXPERIENCE

Data Science Intern <i>Outrix Technologies</i>	Jun 2025 – Jul 2025 <i>Remote</i>
<ul style="list-style-type: none">Performed data analysis and visualization to derive actionable insights from business datasets.Worked with Python, Matplotlib, Seaborn, and Pandas to explore trends and build reporting dashboards.Assisted in building machine learning pipelines for client-focused data science solutions.	
Machine Learning Intern <i>Cognifyz Technologies</i>	May 2025 – Jun 2025 <i>Remote</i>
<ul style="list-style-type: none">Worked on real-world machine learning tasks including data preprocessing, model training, and evaluation.Built predictive models using Python, Scikit-learn, and Pandas for structured datasets.Contributed to internal projects involving classification and regression analysis.	

AI Hackathon Participant

Various Competitions

Remote

Developed innovative AI solutions in object detection and NLP under time constraints.

Designed and deployed AI models using Python, TensorFlow, and OpenCV.

Presented AI-based solutions to industry experts and received constructive feedback.

AI and Machine Learning Developer

Independent / Academic Work

Remote

Developed AI-powered solutions, including TAPACD (Theater Anti-Piracy AI Camera Detection).

Implemented object detection models like YOLO for real-time surveillance applications.

Built and optimized deep learning models using TensorFlow and PyTorch.

EDUCATION

MES College of Engineering

B.TECH in Artificial Intelligence and Data Science , SEMESTER VIII

Kuttiipuram

2022-2026

Sree Krishna Higher Secondary School, Guruvayur

Higher Secondary Education

Thrissur

2021-2022

Blooming Buds Bethania (CBSE), Vellithiruthy

Board Examination

Kunnamkulam

2020

CERTIFICATIONS

- Certificate of Completion – 1 Million Prompters Program by Dubai Future Foundation (Prompt Engineering for AI Systems)
- Certificate – Transformer Models and BERT Model (Google Cloud, Jun 2025, Code: 8443481)
- R Programming for Beginners (Certificate Code: 7722705)
- Apache Pig 101 - Cognitive Class (Issued by IBM Developer Skills Network)
- Accessing Hadoop Data Using Hive - Cognitive Class (Issued by IBM Developer Skills Network)
- First Prize Winner in Code Bytes - CESA XYBEREX 2.0
- Apache Hive - Data Warehouse Software for Reading, Writing, and Managing Large Datasets (Issued by IBM)
- Apache Pig - High-Level Platform for Creating Programs that Run on Apache Hadoop (Issued by IBM)
- AI and ML Workshop Certificate
- Certificate of Completion - Python for Data Science, AI & Development
- Certificate of Participation - ML Workshop at IEEE Student Chapter