

AISHWARYA R

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EDUCATION

SSN College of Engineering

Jul 2021 – Jun 2025

Bachelor of Technology in Information Technology

CGPA: 8.16

Relevant Courses: Data Structures & Algorithms, Database Management Systems, Computer Networks, Probability & Statistics, Object Oriented Programming, Design patterns, Pattern Recognition and Machine Learning

Padma Seshadri Bala Bhavan Senior Secondary School

Jun 2006 – May 2021

Computer Science

Grade: 95.2%

EXPERIENCE

Barclays Global Service Centre Private Limited

Jul 2025 - Present

Technology Developer

- Engineered an AI-powered intelligent document automation platform integrating template parsing, LLM-based semantic key mapping, and context-aware text generation, auto-populating Excel templates using internal API/DB/JSON data and eliminating manual reporting workflows across business units.
- Designed supporting automation modules using Python, Autosys, REST services, and version-controlled workflow orchestration.

Jithwa Solutions

Mar 2024 - Jun 2024

AI/ML Engineer Intern

- Developed a RAG-based legal assistant integrating PDFChat document querying and a BERT-based legal case classifier, combining document ingestion with FAISS-powered vector retrieval and an LLM-driven chat interface for grounded legal reasoning.
- Achieved <2s response latency and 90%+ retrieval precision on large PDF legal corpora, enabling reliable context-aware legal guidance using Python, LangChain, FAISS, Streamlit, and BERT.

PROJECTS

Vision Transformers for Bharatanatyam Video Classification

Jan 2024 – Apr 2024


- Engineered a full-stack video analytics system featuring an inference backend built in PyTorch with REST endpoints and a lightweight Streamlit interface for dataset upload, playback, and prediction visualization.
- Achieved 97.3% accuracy using DeiT-Tiny + Lion + LSTM, outperforming ViT-Base by 3.7× in inference speed and 4× memory efficiency; evaluated using precision/recall/F1 metrics and confusion matrices.

Flight Delay Prediction

 Code Aug 2023 – Sept 2023

- Built a deployable machine learning engine exposed via a Python-based API with a simple web UI dashboard for interactive predictions and feature importance analysis.
- Achieved 0.93 F1 score and 11.98-minute MAE using Random Forest and XGBoost models trained on large-scale US flight datasets.

Nextus - Social Media Application

 Code Mar 2023 – Jun 2023

- Developed a dynamic social media platform enabling users to connect, share posts, and engage with content.
- Used Django framework for backend development and HTML/CSS/JS for creating a customisable and engaging user interface, SQLite3 for efficient data storage
- Implemented graph data structures to model relationships and incorporated search algorithms for user suggestions.

SELECTED PUBLICATIONS

1. **Rainfall Forecasting Model for Amaravathi Basin Using Machine Learning Approach**
Published in *Journal of the Institution of Engineers (India): Series A*, Springer, 2025
2. **Comparative Analysis of Transformer-Based Models for Bail Prediction Using HLDC Dataset**
Presented at *IEEE Region 10 Technical Conference (TENCON) 2025*, Singapore
★ Best Paper Award
3. **Blood Pressure Estimation from Photoplethysmography Signals: An EdgeML Approach**
Presented at *International Conference on Artificial Intelligence and Computational Technologies in Applications (AICTA) 2024*, India

SKILLS

Languages: Python, C++ ,SQL , \LaTeX , Bash

Frameworks and Libraries : Streamlit, Transformers, LangChain, FAISS, PyTorch, Scikit-learn, Pandas, Numpy, Matplotlib, MediaPipe, OpenCV, VGG16, Tesseract, Tkinter, Git, HTML, CSS, JavaScript, Autosys, Docker

ACHIEVEMENTS AND EXTRA-CURRICULARS

- Among top 35 teams selected for Smart India Hackathon 2023 regional level.
- High commendation award in CHINMUN 2019 & PSBBMUN 2019.
- First place in the city level rhapsody music competition conducted by Madras Youth Coir (2018).