ARUNKUMAR K R

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Objective

As a Computer Science and Engineering student with a strong focus on **Machine Learning and Artificial Intelligence**. Experienced in building, evaluating and deploying ML, NLP and Computer Vision models as production-ready services. Seeking for opportunities to explore and contribute across diverse technology to apply data-driven approach, problem solving and model deployment skills to real-world applications.

Education

KPR Institute of Engineering and Technology, Coimbatore   2023 – 2027
B.E. Computer Science and Engineering   **CGPA: 8.86**
Kongu Vellalar Matriculation Higher Secondary School, Perundurai   2022 – 2023
Higher Secondary Education   **HSC: 94.6**

Technical Skills

- **Machine Learning & AI:** Python, NumPy, Pandas, Scikit-Learn, TensorFlow
- **NLP & LLMs:** Transformers, SpaCy, LangChain, ChromaDB, RAG Pipelines
- **Computer Vision:** OpenCV, YOLOv8
- **Model Deployment:** FastAPI, Docker, Streamlit
- **Databases Tools:** MongoDB, SQLite, Linux, Git, GitHub
- **Supporting Web Skills:** React.js, Node.js, Express.js

Internship Experience

SmartED Innovations — Machine Learning Intern   May 2025 – Jul 2025

- Built and deployed Machine Learning models as scalable web services using FastAPI and Docker.
- Worked on end-to-end ML pipelines including data preprocessing, model training and inference serving.

Projects

Justice Chatbot (AI / NLP)   GitHub
Python, LangChain, ChromaDB, Transformers
- Designed a **Retrieval-Augmented Generation (RAG)** system for answering legal queries from documents.
- Implemented semantic search using vector embeddings and contextual LLM-based response generation.

Weather Prediction using Machine Learning   GitHub
Python, Scikit-learn, TensorFlow
- Trained and evaluated predictive ML models using historical temperature and humidity datasets.
- Built an end-to-end ML workflow from data preprocessing to model inference deployment.

AI-Driven PDF Routing System   GitHub
Python, PyMuPDF, Tesseract OCR, NLP
- Developed an AI-based PDF routing system using hybrid text extraction and OCR for scanned documents.
- Applied NLP techniques for document summarization and department classification.

Encrypted Password Manager   GitHub
Java, AES Encryption, CLI
- Designed and implemented a command-line password manager using AES encryption for secure credential storage.
- Enabled encrypted password creation, retrieval, and management to demonstrate secure data handling concepts.

Certifications & Achievements

- DSA Problems: Solved 300+ problems across various competitive coding platforms like Leetcode, Hackerrank
- Hackerrank Certifications: Problem Solving(Basics), Python(Basics), Java(Basics), SQL(Basics)
- Paper Publication: Published a paper on the title **Real-Time Surface Defect Detection and Hardness Prediction in Metals using YOLOv8** on 3rd ICEAMST at RV College of Engineering
- Completed RedHat Certified System Administrator **RHCSA** Certification.
- Completed **OpenCV Bootcamp** Certification offered by OpenCV University.