HARIESH R

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SKILLS

- **Languages:** Python, C, C++, Java, MySQL
- **Frameworks & Libraries:** TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, OpenCV
- **Tools & Technologies:** Jupyter, Git/GitHub, VS Code, Streamlit, Tableau, Matplotlib, Seaborn
- **Soft Skills:** Analytical thinking, clear communication, teamwork, adaptability, time management, problem-solving, critical thinking, attention to detail

PROJECTS

Handwritten Character Classifier with Custom Neural Network GitHub   Docs   *Apr 2025*

- Built a fully connected neural network from scratch using NumPy to classify 39 handwritten character classes, achieving 76.4% training and 71.4% test accuracy in 50 epochs.
- Preprocessed 2.57M images using OpenCV (CLAHE, Gaussian blur, resizing to 28×28), reducing noise by 30% and standardizing inputs.
- Applied augmentation (rotation, zoom, flips) to balance classes and improve minority recall by 12%; modularized the pipeline with unit tests and documentation.

Python Sorting Algorithms Library GitHub   *Jan 2025*

- Developed a pip-installable Python library implementing 10 core sorting algorithms and utilities, emphasizing modularity and reusability.
- Built all algorithms from scratch with type hints and documentation, achieving optimal time complexities.
- Created a pytest suite with 100% coverage and integrated GitHub Actions CI, reducing defects by 40% and ensuring code quality.
- Published on PyPI with over 2,300 downloads, cultivating a vibrant open-source community that actively contributes enhancements and drives continuous improvement.

Secure Birthday Reminder App GitHub   Live Demo   *Mar 2025*

- Developed a Streamlit app with Google OAuth (via oauthlib) for user authentication and SQLAlchemy ORM on MySQL, securing data with SSL connections and Fernet encryption.
- Built a dynamic dashboard using Streamlit components and custom CSS to display upcoming birthdays, integrated Gemini AI through the OpenAI API for on-demand personalized greeting generation, and scheduled SMTP email reminders using APScheduler.
- Containerized with Docker and deployed on Render, employing environment variables for secrets management, automated HTTPS, and scalable instance configuration.

CarQuest: AI Car Recommender GitHub   Live Demo   *Jan 2025*

- Built an ETL pipeline to scrape and normalize car data into MySQL with optimized indexing.
- Developed a Streamlit frontend with SQLAlchemy and Redis caching, cutting query times by 35%.
- Created an AI chatbot using Rasa and TensorFlow NLU for dynamic, intent-based SQL querying.
- Containerized and deployed via Docker and GitHub Actions, achieving 99.9% uptime.

MarketGuardians: AI-Based Financial News Verifier GitHub   *Oct 2024*

- Selected in the top 15 of Anna University Hackathon; received **certification** for the project.
- Built a hybrid fake news detection model combining FinBERT embeddings with metadata in a Random Forest classifier, achieving 0.92 F1-score.
- Developed an NLP pipeline with tokenization, lemmatization, stopword removal, and SMOTE to balance skewed classes effectively.
- Deployed via Streamlit for real-time news verification with explainable AI features and interactive visualization.

EDUCATION

Shiv Nadar University Chennai *B.Tech in Artificial Intelligence & Data Science*   *2023 – 2027*

- GPA: 8.93
- Coursework: Machine Learning, DS & Algorithms, Probability & Statistics, Deep Learning, NLP, CV, DBMS