MAHARSHI SHAH

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SUMMARY

AI/ML Engineer skilled in **machine learning**, **deep learning**, **computer vision**, **NLP**, and **generative AI**. Experienced in building and deploying **end-to-end ML pipelines**, **integrating LLMs**, and applying **prompt engineering**. Proficient in **Python**, **TensorFlow**, **PyTorch**, and **Hugging Face**, with expertise in model optimization, real-time inference, and scalable AI application deployment.

WORK EXPERIENCE

AI/ML Engineer | Techforce Global **May 2025 - Present**

- Designed and deployed **AI/ML-powered solutions** including computer vision pipelines, **NLP**-driven applications, and **predictive analytics** models for industries such as **healthcare** and **fintech.** Applied **deep learning frameworks (TensorFlow, PyTorch, Keras)** for tasks such as **image recognition, sentiment analysis, and anomaly detection.**
- Built **scalable data pipelines** for structured and unstructured data, integrating preprocessing, feature engineering, and model training workflows.Collaborated with cross-functional teams to deliver **end-to-end ML lifecycle** solutions, from **model development to deployment with REST APIs and Streamlit dashboards**.
- Enhanced efficiency by leveraging **MLOps practices (Docker, Git, CI/CD pipelines)** and ensuring **ISO-compliant, Agile delivery** of AI projects.

Data Analyst & Machine Learning Intern | Crossshore Solutions **Aug 2022 – Jul 2023**

- Contributed to the development of **Taskify**, a **project management system**, by building predictive analytics features that improved **task completion tracking and resource allocation**.
- Designed **data pipelines** with preprocessing workflows to clean and transform large volumes of project/task data, reducing reporting errors by **25%**.
- Developed **RESTful APIs** using **Node.js** & **MongoDB** to extract and serve **real-time project insights**, reducing **latency** by **30%**.
- Built interactive **dashboards** integrating **ML-driven KPIs** (task progress, user productivity, workload distribution), improving engagement of 25+ active users and enhancing managerial decision-making. Applied machine learning models to analyze task completion patterns, helping improve deadline adherence by 15%.

PROJECT DETAILS

AI-Powered Resume & Career Assistant Bot | Python, Gradio, Gemini API, Hugging Face, Pushover, PDF Parsing - Link

- Built an **NLP-driven AI assistant** for career guidance using **generative AI** and **large language models (LLMs)**.Implemented tool-use capabilities (**email logging, unhandled query tracking**) to expand AI functionality.
- Integrated **Pushover API** for real-time notifications of unresolved queries, ensuring human-in-the-loop support.Engineered a PDF parsing pipeline to analyze resumes, improving AI context handling and domain adaptation.
- Designed an interactive **Gradio-based UI**, enabling conversational interaction and enhancing accessibility.

Smart Email Assistant | Python, Flask, JavaScript, Tailwind CSS, Gemini API, Hugging Face, REST APIs - Link

- Developed a **full-stack AI assistant** capable of **email generation, refinement, and summarization** using **LLMs (Gemini API)** and **prompt engineering**.
- Designed a **modular backend** with Flask and REST endpoints, supporting scalable deployment and robust error handling. Integrated **document-based personalization** (e.g., resumes) via file uploads, enhancing **context-aware AI predictions.**
- Delivered a polished **frontend UI** with **Tailwind CSS** and asynchronous **JavaScript** for real-time inference and seamless user interaction.

Plant Disease Classification | TensorFlow, Keras, MobileNetV2, NumPy, OpenCV, Streamlit, Matplotlib, Seaborn - Link

- Developed and fine-tuned a deep learning model using **MobileNetV2** (transfer learning) on a dataset of ~20,000 **augmented** plant leaf images, achieving **82%** accuracy, **85%** recall, and **0.81** F1-score, enabling reliable disease **classification** across **38+** plant categories.
- Built an **end-to-end ML pipeline** including data ingestion, preprocessing, and **augmentation**, optimized with **hyperparameter tuning**, **early stopping**, and learning rate scheduling to prevent **overfitting** and improve model generalization.
- Performed advanced evaluation and error analysis using **classification reports**, **confusion matrix heatmaps**, and visual inspection of predictions, ensuring model robustness and interpretability.
- Deployed the trained model into an interactive **Streamlit app** with **real-time inference** (<2s per image), **confidence scoring**, and user-friendly image upload functionality, providing a practical computer vision solution for agriculture and early plant disease detection.

EDUCATION

University of Texas at Arlington | Master of Science in Computer Science | **GPA: 3.90/4** **Aug 2023 – May 2025**

Relevant Coursework: Machine Learning, Deep Learning, Neural Networks, NLP, Data Mining, Artificial Intelligence, Cloud Computing and Big Data, Design and Analysis of Algorithms, Database Systems.

Gujarat Technological University | B.E. in Computer Engineering | **GPA : 3.56/4** **Jun 2019 – May 2023**

TECHNICAL SKILLS

- **Languages & Libraries**: Python, R, SQL, Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Keras, OpenCV, NLTK, Hugging Face
- **Deployment and Tools**: Flask, Django, Streamlit, Gradio, RESTful APIs, Docker, Git, CI/CD, Apache Airflow
- **AI/ML Techniques**: Machine Learning, Deep Learning, Neural Networks, NLP, Computer Vision, Generative AI, Large Language Models, Prompt Engineering, Transfer Learning, Hyperparameter Tuning, Predictive Modeling
- **Databases**: MySQL, PostgreSQL, Snowflake, MongoDB
- **Data & Visualization**: Power BI, Tableau, Matplotlib, Seaborn, Data Pipelines, Feature Engineering
- **Cloud & Platforms**: Google Colab, Jupyter, AWS (basic), Azure (basic)