# Darshan BR

AI/ML Engineer
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## Professional Summary

Dedicated and performance-driven AI/ML Engineer with over 1.5+ years of experience in developing, fine-tuning, and deploying machine learning models, LLMs, and TTS systems. Specialized in NLP, OCR, Computer Vision, and multimodal learning using open-source and cloud-based models. Proven ability to optimize cost by replacing paid APIs with scalable local solutions. Passionate about building intelligent systems that deliver measurable impact.

## Professional Experience

### DataSpark AI Solutions

AI/ML Engineer - Chennai, TamilNadu | 12/2024 – Present

Roles & Responsibilities:

- Collaborated on fine-tuning models such as LLaMA, Qwen, and DeepSeek. Packaged and deployed them in Dockerized FastAPI services for inference.
- Developed OCR workflows using Qwen-VL and MMOCR to extract text from diverse document formats. Improved preprocessing steps (e.g., image resizing, denoising) to boost accuracy.
- Transitioned from cloud-based Text-to-Speech (Google Cloud) to local solutions. Tuned on-premise TTS setups to reduce latency and cut costs by ~40%.
- Used LangChain and LlamaIndex to create basic Retrieval-Augmented Generation pipelines. Managed vector stores (e.g., ChromaDB) for embedding storage and similarity search.
- Containerized image generation models (e.g., SDXL) and set up CI/CD pipelines to push updates. Monitored GPU usage and scaled instances as needed.
- Created Docker containers and CI workflows (GitHub Actions) for automated testing and deployment. Monitored model performance using simple logging and alerts.
- Worked closely with backend developers and data engineers to integrate ML services into product features. Guided interns on coding standards, code reviews, and basic ML concepts.

### Rubixe AI

Data Science Consultant - Bangalore, Karnataka | 12/2023 - 11/2024

Roles & Responsibilities:

- Spearheaded Python-driven data manipulation and statistical modelling, revolution data-driven decision-making processes.
- Utilized SQL and Power BI to meticulously scrutinize intricate datasets, resulting in a substantial 20% reduction in fraudulent activities.
- Engineered cutting-edge machine learning models (logistic regression, decision trees, random forests) to meticulously refine customer segmentation strategies.
- Amplified team productivity through a diverse skill set, amalgamating programming expertise, statistical analysis, and data visualization with exceptional efficiency.

# Skills

- Curriculum Expertise: Machine Learning, Deep Learning, Neural Networks, NLP, Computer Vision, Text-to-Speech, Speechtotext.
- MLOps: Docker, CI/CD Pipelines, Git, MLflow, Airflow, DVC.
- Frameworks & Tools: LangChain, LangGraph, LlamaIndex, FastAPI, Transformers (Huggingface), Agentic AI Frameworks.
- Programming & Databases: Python, SQL, Vector DBs.
- Cloud Platforms: AWS, GCP, Azure.

# Projects

## 1. IELTS Preparation App (https://ieltsgenai.com/)

- Developed AI-Powered Speaking Model: Designed and implemented an AI-driven speaking test module using Python, GPT models, and prompt engineering, simulating real-time IELTS speaking tests with automated feedback and band score generation based on IELTS criteria.Integrated OpenAI APIs.
- Created AI Speaking Playground: Built an interactive platform for users to practice communication skills, integrating cloud and local TTS/STT models with Flask and MongoDB for seamless user experience and real-time performance tracking.
- Engineered Customer-Facing Chatbot: Developed an NLP-based chatbot using Python and MySQL to engage website visitors, answer queries, and enhance user retention, improving customer interaction and platform accessibility.
- Integrated Advanced Technologies: Leveraged MongoDB, MySQL, Flask, and cloud TTS/STT models for robust data management and real-time processing, ensuring scalable and efficient platform performance.
- Managed Development and Deployment: Utilized Git for version control and collaborated on email configuration and cloud deployment, delivering a production-ready proof-of-concept (POC) that aligned with user needs and business goals.

## 2. AI Interview Platform (https://intervu.in/)

- Developed AI Backend and Interview System: Built end-to-end AI backend using Python, GPT models, and prompt engineering (Chain of Thought, Tree of Thought, Zero-Shot, Few-Shot) to create dynamic HR, managerial, technical, and visa interview simulations tailored to users' experience and resume data.
- Implemented NLP and Real-Time Interaction: Integrated NLP, STT, and TTS models with Flask and MongoDB to enable natural, human-like AI interviewer questions and real-time user interactions, enhancing speaking skills and confidence for freshers and technical job seekers.
- Designed Automated Feedback System: Engineered an automated feedback and band score generation system, leveraging NLP to provide personalized, natural feedback via email configuration, reducing interview fear and improving user performance.
- Utilized Web Scraping for Data Enrichment: Employed Selenium and Beautiful Soup to scrape relevant data, enhancing AI question generation and aligning interview content with industry-specific technical and HR requirements.
- Ensured Scalable Deployment: Managed MongoDB for efficient data storage and Flask for robust API development, delivering a scalable proof of-concept (POC) that supports final-year students and unemployed professionals in real-time interview practice.

# Education

- BCA, Government Science College, Hassan, Karnataka | 05/2020 - 05/2023
- Certified Data Scientist, DataMites Institute, Bangalore

# Certifications

- Certified Data Scientist: IABAC
- MLOps Foundations: iNeuron
- Machine Learning: Simplilearn