ARYA GOKHALE

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EDUCATION

Dwarkadas J. Sanghvi College of Engineering   **2022 − 2026**
B.Tech in Mechanical Engineering (Honours in Robotics)   *9.07 CGPA*

M.G.M. Junior College of Science   **2021 − 2022**
HSC in Science with IT (4th Rank, MHTCET - 96.01 percentile)   *88.00%*

EXPERIENCE

IIT Mandi − *Research Intern*   **March 2025 − Present**
- Currently engaged in research on Artificial Intelligence and Machine Learning domain.

Dwarkadas J. Sanghvi College of Engineering − *Research Intern*   **Jan 2025 − Present**
- Team lead - Research on Reliability Analysis of HVAC systems data in passenger cars.
- Presented at NCRS-2025, Amity University, Noida (Arya Gokhale et al.).

PROJECTS

AgentFlow | *Python, Langchain-Agents, LLMs, Prompt Engineering, FastAPI, Streamlit* | Github
- Designed modular workflows to maximize reusability of core components across multiple tasks.
- Implemented prompt engineering techniques to enhance LLM accuracy, for improving contextual understanding.
- Developed an efficient chaining mechanism to sequentially process and refine multi-step AI tasks.

Solar Panel Detection from Satellite Imagery | *OpenCV, YOLO, Python, Supervision* | Github
- Built a solar panel detection system to master object detection fundamentals, including data preprocessing, model training, and evaluation.
- Created custom implementations of IoU and interpolation algorithms to deepen understanding of evaluation metrics.

Product Feature Extraction | *Pix2Struct, Python, PyTorch* | Github
- Implemented a script to efficiently automate the download of images, streamlining the dataset creation process.
- Fine-tuned the pix2struct model for domain-specific measurement extraction, optimizing GPU memory usage.
- Achieved a notable rank of 292 out of 70,000 participants (Amazon ML Challenge 2024).

Image Captcha Detection | *TROCR, PyTorch, Pandas* | Github
- Fine-tuned a model to solve Image Captcha Detection, leveraging advanced OCR techniques to interpret distorted and noisy captchas.
- Achieved 1st place in the DataBlitz - Opencode'24 competition organized by GeekHaven, IIIT Allahabad.
- Applied cutting-edge machine learning practices such as learning rate experimenting, showcasing creativity in model optimization and successfully adhering to strict no-API competition rules.

Financial Sentiment Analysis | *BERT, PyTorch, Streamlit* | Github
- Fine-tuned BERT for sentiment analysis in the financial domain, focusing on extracting insights from financial news, reports, and stock market data.
- Acquired necessary skills for fine tuning models for specific tasks.
- Deployed the model on Huggingface Spaces, creating an interactive web interface for real-time sentiment analysis.

TECHNICAL SKILLS AND CERTIFICATIONS

Languages : Python, C/C++, SQL, HTML, CSS, Javascript

Tools : VS Code, Google Colab, Kaggle, Jupyter

Technologies/Frameworks : Streamlit, Tensorflow, Keras, PyTorch, Huggingface Transformers, Langchain

Relevant Certifications: Kaggle Certifications, ML, DL, NLP, GENAI BootCamps | Link

ACHIEVEMENTS

- 1st place in DataBlitz - Opencode'24 (GeekHaven - IIIT Allahabad).
- Ranked 292nd out of 70,000+ participants in the Amazon ML Challenge 2024.
- Secured 6th place in the DJS NSDC Machine Learning Competition (99.42% F1 Score).
- Achieved Kaggle Expert status.