

# MANSEE AGRAWAL

Machine Learning Engineer

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LinkedIn

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Portfolio

HuggingFace

## Summary

Machine Learning Engineer with 4+ years of experience in building and deploying AI/ML solutions. Proficient in Deep Learning, Natural Language Processing, Generative AI and Computer Vision. Strong background in Python, Transformers, and full-stack model deployment using Flask and FastAPI. Experienced in both research and production environments with a passion for solving real-world problems.

## Education

### Technocrats Institute of Technology Excellence

Master of Engineering in Artificial Intelligence and Machine Learning

Bhopal, Madhya Pradesh

2020-2022

### Jabalpur Engineering College

Bachelor of Engineering in Computer Science

Jabalpur, Madhya Pradesh

2016-2020

## Professional Experience

### Iopex Technologies

Machine Learning Engineer

Bangalore

03/2024 - present

- Working on Deep Learning, NLP, GenerativeAI, Chatbots, RAG, LLMs (LLaMa 3.2, LLaMa-Vision, GPT-4), LayoutLM, and text-clustering
- Build and fine-tuned RAG pipelines using Langchain, hybrid search, reranking, chunking strategies.
- Finetuned LayoutLM for extracting structured data from order forms.

### Justdial

Machine Learning Engineer

Bangalore

05/2022 - 03/2024

- Developed and fine-tuned models for object detection, image classification (CNN, Yolo, ResNet50, EfficientNetV2, Swin, ViT), OCR (PaddleOCR), and NLP tasks.
- Implemented LLM-based applications using Transformers (BERT, GPT, LLaMA), and deployed solutions with Flask/FastAPI.
- Experience with Kafka, RabbitMQ, Docker, and vector databases (Milvus, Weaviate).

### Kloudspot

Machine Learning Engineer

Bangalore

10/2020 - 05/2022

- Developed CV applications for image/video processing, including detection/classification models (YOLO, SSD, Resnet50).
- Built and deployed autoencoders for facial reconstruction.
- Converted models to OpenVINO, TensorRT, and TFLite for efficient deployment.

## Projects

### Chatbot with RAG Pipeline – Generative AI for Licensing Queries

- Retrieved relevant documents from Mongo Atlas using LangChain.
- Used GPT-4 with context-based summarization to generate user responses.

### Image Classification & Object Detection

- Trained CNN, ResNet, EfficientNet, Swin Transformer, and ViT for tasks like mask detection, age classification, blur/clean classification and orientation detection.
- Built autoencoders for face reconstruction.
- Used Python, Transformers, Keras, PyTorch, Flask, Fast API.

## Natural Language Processing

- Done post processing like POS tagging, NER, sentiment analysis on text extracted from images using PaddleOCR and on raw text as well.
- Fine-tuned LayoutLM for form extraction and DONUT for banner text extraction.
- Built sentiment and NLI models to identify contradictions from review pros and cons.
- Developed DistilBERT-based QA model for key info extraction from reviews.
- Worked on Llama, Langchain to generate the reviews.

## Technical Skills

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**Languages:** Python

**Frameworks/Tools:** PyTorch, TensorFlow, Keras, Transformers, LangChain, Flask, FastAPI, Docker, Kafka, RabbitMQ, Git

**Domains:** Computer Vision, NLP, OCR, Generative AI

**Techniques:** CNNs (ResNet, EfficientNet), Transformers (BERT, GPT, LLaMA, T5), RNNs (LSTM, GRU), LayoutLM, DONUT, YOLO, SSD

## Achievements

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- Awarded **Top Talent (FY 23–24)** for outstanding performance
- Winner, **Smart India Hackathon** (2019 & 2020)
- **GATE Qualified** (2020)

## Interests

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- Dancing
- Badminton
- travelling