

# Mihir Rajesh Chaubey

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## PROFESSIONAL EXPERIENCE

### **Tata Motors Limited – Gen AI Intern**

Sept24 -Feb 25

Fine-tuned several large language models (Llama-3) for email response, customer support chat bot and domain specific -Q&A .Engineered domain-specific prompts and optimized training pipelines using Hugging Face, PEFT.

Built a real-time license plate recognition system using YOLOv8 for detection and OCR from dashcam footage.Improved YOLO model accuracy by 15% through data augmentation, model pruning, and custom evaluation metrics.

Collaborated with R&D teams to align GenAI solutions with automotive applications and compliance standards.

## PROJECTS

### Heart Sound Classification | *Python, PyTorch, Google Cloud*

Jan 2025-Feb2025

- Designed and trained VGG-attnet( a custom architecture VGG-based deep learning model with attention mechanism) for 5-class heart sound classification using a GitHub ECG dataset, achieving 87% AUC
- Implemented the model architecture from scratch in PyTorch and evaluated with ROC and cross-validation
- Deployed the trained model on Google Cloud for remote inference.

### MiniGPT Implementation | *Python, PyTorch, NumPy*

Feb 2025 – Mar 2025

- Implemented a **GPT-style transformer (MiniGPT)** from scratch using PyTorch and NumPy
- Built core components including multi-head self-attention, positional encoding, and transformer blocks for character-level language modeling
- Trained the model on a small corpus, gaining hands-on understanding of tokenization, autoregressive decoding, and loss scaling.

### Fine-Tuned Whisper for Hindi ASR | *Python, PyTorch, Hugging Face*

Mar 2025 – Apr 2025

- Prepared the data with WhisperProcessor ,specifying language="Hindi" ,task="transcribe".
- Reduced WER from 63% to 30 % (zero-shot) after 4k training steps using Seq2SeqTrainer.
- Pushed the fine-tuned model to Hugging Face Hub using Gradio for inference.

## SKILLS

Languages:Python,C/C++,MySQL

Library and Framework: TensorFlow, Pytorch, Numpy, Pandas, Scikit-Learn, Matplotlib , Seaborn

Other Tools: Git, GitHub, Hugging Face, Weights & Biases, Streamlit, Google Colab, Docker, Jupyter Notebook,Kaggle kernels ,FastAPI, Google Cloud

## EDUCATION

MIT World Peace University (MIT-WPU)

Jun 2021 – 2025

Btech Electronics and in Communication Engineering - AI/ML

Pune, Maharashtra