Hardik Chhipa

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Experience

AI Intern ⌗ — Hyderabad, TS
Naventra — June 2025 – Present

- Developing a multilingual video translation pipeline using Whisper, FFmpeg, and TTS, enabling automated dubbing with speaker-consistent voice cloning.
- Gained hands-on experience in speech recognition, neural machine translation, and audio-video synchronization for real-world media localization applications.

Research Intern ⌗ — Jodhpur, RJ
IIT Jodhpur — June 2024 – Aug 2024

- Developed MLVICX to address challenges in extracting insights from medical data.
- Solved image analysis inefficiencies in MIMIC using BYOL for better representations.
- Used BERT, Bio-BERT, and SQL to extract and analyze large-scale healthcare data in real time.
- Improved model robustness with VICReg for optimized loss calculation.

Education

SRM Institute of Science and Technology — Sept 2021 – June 2025
BTech, Computer Science Engineering

- CGPA: 9.0/10.0

Projects

Building ClearSight.AI — *GitHub*

- Build a Real-Time Diabetic Retinopathy Detection on Edge Devices Achieved **98.39** % accuracy using Knowledge Distillation, Mixup Augmentation, and Dense CNNs to enable efficient, high-accuracy diagnosis under resource constraints; Presented at IEEE - ICOECA (March 2024) and ICDCC (November 2024).
- Tools Used: Python, TensorFlow, Keras, OpenCV, Pandas, NumPy, Edge Deployment Tools, GCS and Firebase.

Dakshaab: Multilingual AI Chatbot — *GitHub*

- Developed a multilingual AI healthcare chatbot to enhance patient triage and specialist recommendations.
- Tools Used: Python, Transformers (Hugging Face), PyTorch, Pandas, Scikit-learn, NLTK, Matplotlib, Plotly, Git.

Campus Aide — *GitHub*

- Solved issues in emergency reporting, safety alerts, and campus transportation by developing an app with real-time reporting, vehicle tracking, interactive visualizations, and user feedback integration.
- Tools Used: Node.js, Express.js, React.js, Tailwind CSS, Firebase, Ionic, TypeScript, Geolocation API.

Publications

- Refining Diagnostic Accuracy in DR Detection via Mixup Augmentation Techniques — ICDCC 2024
- MLVICX: Multi-Level Variance-Covariance Exploration for Chest X-ray SSL — arXiv 2024
- Next-Generation Electronics Packaging Technologies for High-Performance Applications — ASME 2024
- Light Weight CNN Based on Knowledge Distillation for DR Detection — ICOECA 2024

Achievements

1. Philips Ideathon (Winner)
2. Natwest Hack Bake-Off (Runners-up)
3. Salesforce AI Associate-(Certification)
4. Digizest Hackathon (Participation)

Skills

Languages & Backend: Python, Async and Fast API, Java, C++, SQL, JavaScript, HTML, CSS, SQL.

Frameworks & Libraries: React.js, Redux, Node.js, Express.js, MongoDB, Django, Software Development Life-cycle tools.

Cloud Technologies: AWS Compute (Lambda, EC2), S3, SageMaker, Firebase, Docker, GitHub.

ML & Data Science: TensorFlow, Pytorch, Numpy, Pandas, Sklearn, Keras, Matplotlib, Plotly, Seaborn, OpenCV, NLTK, Transformers, Spark, Hadoop, PowerBI, ETL, Data Warehousing, Familiar with Data Structures, and Data Validation.