

DHANESH J

Machine Learning Engineer | AI Engineer

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SUMMARY

Recent B.Tech graduate in Data Science and Artificial Intelligence who designs, trains, and deploys deep learning systems across computer vision, NLP, and audio. Built and shipped models including a CNN-ResNet-TransUNet ensemble for medical image segmentation (93.34% accuracy, 0.8356 Dice Score), a BERT-based NLP recommender, and a CNN/LSTM audio emotion classifier, deploying work end-to-end with Streamlit. Comfortable working across the full pipeline: feature engineering, model training, evaluation, and deployment. Seeking Machine Learning Engineer or AI Engineer roles building production-grade AI systems.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript, HTML/CSS

Machine Learning & Deep Learning: CNN, LSTM, ResNet-18, TransUNet, BERT, Computer Vision, NLP, Model Evaluation

Frameworks & Libraries: PyTorch, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Librosa, Streamlit, React

Tools & Platforms: Git, GitHub, Linux, MySQL, Power BI, Excel

PROJECTS

AI-Based Lung Cancer Detection & Segmentation System

- Designed a hybrid ensemble model combining CNN, ResNet-18, and TransUNet for tumor classification and segmentation on the LUNA16 CT scan dataset.
- Achieved 93.34% classification accuracy and a 0.8356 Dice Score for tumor boundary segmentation, validating model performance against clinical-grade benchmarks.
- Took the model from training to production by deploying it via Streamlit for real-time CT scan visualization and inference.

Career Recommendation System using BERT

- Built a BERT-based NLP model that recommends personalized career paths from free-text user input.
- Shipped a complete working web interface within a 24-hour hackathon, covering model integration end-to-end.

Emotion Detection from Raw Audio

- Built a CNN/LSTM model to classify human emotion from raw voice recordings.
- Engineered acoustic features — MFCCs, spectrograms, and chroma — using Librosa, then trained and evaluated models in TensorFlow/Keras.

AI-Powered Job Portal with Resume Screening

- Built an AI-based resume screening and career-recommendation engine, plus a roadmap-generation module, for a job portal product.
- Delivered the project during IBM National Hackathon, integrating ML-based screening logic with a usable end-user interface.

EDUCATION

Dr. M.G.R. Educational and Research Institute

Oct 2022 – May 2026

B.Tech – Data Science and Artificial Intelligence

CGPA: 8.5

CERTIFICATIONS

- IBM: Python, Java, Business Intelligence, Cloud Platform
- NPTEL: Python for Data Science

ACHIEVEMENTS

- Participated in national-level hackathons including IBM National Hackathon and VIT Chennai Hackathon.
- Presented research papers at NCICT'25 and ICCT'26 conferences.