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WORK EXPERIENCE

 CARECLOUD MTBC – ISLAMABAD, PAKISTAN

JUNIOR AI ENGINEER – 06/20/2025 – CURRENT

- Under the CTO's supervision at CareCloud, I'm developing a HIPAA-compliant voice agent for automating medical call handling across practices.
- The system integrates Voice Activity Detection (VAD), turn-detection, Automatic Speech Recognition (ASR/STT), Large Language Model (LLM), and Text-to-Speech (TTS). This solution delivers human-like, context-aware conversations, real-time intent recognition, and seamless backend integration (EHR/CRM).
- Key NLP competencies include generative modeling, speech analytics, multilingual support, and compliance with healthcare regulations.


IT INTERN – 03/24/2025 – 06/19/2025

- Built a voice agent that analyzes call transcripts using KPI-based metrics to generate ideal conversations and benchmarks.
- It then produces ideal conversations to coach employees, driving a 20% boost in team efficiency through targeted performance improvement.

 TERADATA – ISLAMABAD, PAKISTAN

MACHINE LEARNING INTERN – 06/24/2024 – 08/03/2024

- Created deep learning models leveraging Teradata Vantage with teradataml for large-scale financial analytics, and separately with sklearn for various deep learning workflows.
- Developed the entire data science pipeline—from preprocessing and feature engineering to model training and evaluation.
- Harnessing Teradata's in-database analytics capabilities, I optimized workflows for handling vast datasets while ensuring scalable and efficient model development.

 SYSTEMS LIMITED – ISLAMABAD, PAKISTAN

ARTIFICIAL INTELLIGENCE INTERN – 07/20/2023 – 09/19/2023

- Automated the data-science pipeline by removing the need for ML Engineers to write code for machine learning tasks.
- Allowed users to view numerous interactive graphs, evaluate and save trained models, at just the click of a few buttons.
- Improved the efficiency and performance of ML Engineers by saving time and allowing to focus more on other tasks like feature crossing, model performance improvement.

 RAPIDEV – ISLAMABAD, PAKISTAN

MACHINE LEARNING INTERN – 06/20/2023 – 07/19/2023

- Worked with a team of ML Engineers to automate object detection for a Saudi Military project.
- Used computer vision and trained the model to automatically identify/detect different vehicles from cameras and drones.
- Annotated multiple objects which included images from different angles, leading to a 53% improvement in model accuracy.

 DATA BI – ISLAMABAD, PAKISTAN

DASHBOARD & ANALYTICS INTERN – 01/16/2023 – 01/31/2023

- Analyzed large dataset of various companies by using Tableau and Power BI.
- Presented reports and insights to the clients, which allowed them to make better business decisions effectively.

EDUCATION AND TRAINING

09/01/2021 – CURRENT Islamabad, Pakistan

BACHELOR OF SCIENCE (ARTIFICIAL INTELLIGENCE) National University of Computer and Emerging Sciences

Website <https://www.nu.edu.pk/> | Level in EQF EQF level 6

SKILLS

Voice Agents | Agentic AI | Generative AI | Large Language Models | Computer Vision | Natural Language Processing | Machine Learning | Data Science | Deep Learning | Data Engineering | MLOPS | huggingface transformers | PyTorch | Tensorflow | Numpy | OpenCV | Matplotlib | Scikit-Learn | Python | Pandas | Apace Airflow | HTML/CSS

PROJECTS

04/20/2025 – CURRENT

AI Agent for University Portals

Built an AI agent to automate university portal workflows for instructors. Instructors upload PDF class records, and the agent uses OCR, NLP/NLU, and LLM-driven processing to generate results, draft emails, update portals, and execute other routine tasks. By handling calculations and administrative functions automatically, it saves faculty time and improves efficiency—mirroring leading AI use cases that streamline educator workflows .

08/19/2024 – 04/16/2025

CCTV Surveillance using Computer Vision and Generative AI

Developed an AI-powered surveillance system using a Vision Transformer (ViT) for violent activity detection, enhanced with structured learning and adversarial training for high accuracy and low false positives. Integrated a custom YOLOv8 model fine-tuned on a weapons dataset for real-time detection and pinpointing of individuals carrying firearms or knives. Implemented scene understanding via CLIP, feeding semantic insights into an automated report-generation pipeline built with LangChain (GPT & FLAN-T5). Optimized live-stream performance through multi-threaded processing of DroidCam feeds, ensuring responsive, real-time alerts.

11/20/2024 – 12/09/2024

Deep Learning for Custom Emoji Generation

Built a live deep-learning system that uses GANs and generative AI to translate users' facial expressions into real-time emojis. It captures facial features via video, applies expression recognition, and dynamically synthesizes matching emojis, creating an interactive, expressive user experience.

11/10/2024 – 11/17/2024

Human Action Recognition with Vision Transformer

Fine-tuned a Vision Transformer (ViT) for action recognition on the HMDB dataset. Extracted and preprocessed video frames, then trained ViT to learn spatiotemporal patterns for classifying actions across 51 categories. Target accuracy was 90%, and the model achieved 95% on both training and test sets.

10/21/2024 – 11/14/2024

Sign Language Detection and Audio Generation

Developed a real-time sign language-to-speech system using CNN and generative NLP. The system captures gestures via video or image input, recognizes them with a Convolutional Neural Network, converts the decoded gestures into coherent sentences using a GPT-based language model, and employs Hugging Face-based Text-to-Speech to produce natural audio—enabling seamless sign-to-speech communication.

06/24/2024 – 08/03/2024

Machine Learning Model for Credit Score Classification

Engineered a scikit-learn workflow to classify credit scores into three tiers (e.g., "Good," "Standard," "Poor"). The pipeline includes data preprocessing (imputation, encoding, scaling), feature selection, model training (e.g., Random Forest/XGBoost), hyperparameter tuning via GridSearchCV with cross-validation, and evaluation on a hold-out test set—yielding robust generalization.

04/15/2024 – 04/27/2024

Diet Planner with AI and LLM's

Built an ML pipeline using K-means clustering to segment patients by weight status based on key health indicators. Each cluster triggers personalized diet plan generation via a Hugging Face-powered language model, delivering nutritionally tailored, context-aware meal recommendations for each individual health profile—effectively automating dietary guidance.

11/10/2023 – 12/05/2023

Stock Price Prediction with LSTM (Reinforcement Learning)

Built an LSTM-based system for real-time Google stock prediction. The model was trained on historical GOOG price data and is deployed via a live API (e.g., AlphaVantage), enabling continuous forecasting of stock movements.