

# Tanzeel Ur Rehman

+92-3055598916 | [tanzeelurrehman6007@gmail.com](mailto:tanzeelurrehman6007@gmail.com) | [LinkedIn](#) | [Portfolio](#) | [GitHub](#)  
Lalazar-1, Wah Cantt, Rawalpindi, Pakistan

## Summary

AI Engineer with 4+ years of experience specializing in machine learning, deep learning, and generative AI. Proven expertise in building end-to-end AI solutions, developing intelligent agents, and deploying scalable models in production environments. Skilled in full-stack development with strong knowledge of cloud platforms, MLOps practices, and automation workflows. Currently expanding expertise in AI-driven business automation while mentoring junior engineers and contributing to impactful, cross-functional projects in collaborative environments.

## Technical Skills

**Programming Languages:** Python, JavaScript, TypeScript, C#, SQL, C++

**Machine Learning & AI:** Deep Learning, Computer Vision, Generative AI, NLP, AI Agents, Recommendation Systems, Virtual Try-On Systems, RAG Pipelines, Prompt Engineering, Convolutional Neural Networks (CNNs) for classification, Transfer Learning with Pre-trained Models, Gesture-based AI Systems, Regression Modeling (Linear & Polynomial), Random Forests, Time-Series Forecasting, Sentiment Analysis, Churn Prediction, Survey Data Analysis

**AI Frameworks & Libraries:** TensorFlow, PyTorch, Scikit-learn, OpenCV, Hugging Face Transformers, LangChain, LlamaIndex, NLTK, TextBlob

**Generative AI & Agents:** Custom AI Agents, Conversational AI, Chatbots, Sales & Marketing Automation, Business Workflow Automation, Fine-tuning LLMs, OpenAI APIs

**Computer Vision:** Image Segmentation, Object Detection, GANs, Real-time Inference Pipelines, Virtual Try-On Systems, Medical Image Processing, Skin Lesion Analysis, Eye & Face Detection for Control Systems, Vehicle Damage Detection (CNN-based)

**Backend Engineering for AI:** FastAPI, Flask, Node.js, .NET Core, RESTful APIs, GraphQL, Microservices

**Frontend for AI Platforms:** Next.js, React.js, TypeScript, Tailwind CSS, Material UI, Ant Design, Framer Motion, Streamlit, Gradio, Data Visualization Dashboards, Android/Java Integration for AI-powered Apps

**Databases & Data Engineering:** PostgreSQL, MongoDB, Microsoft SQL Server, Firebase, Redis, ETL Pipelines, Data Preprocessing, Feature Engineering, Image Dataset Preparation, Data Augmentation for Class Imbalance, Multi-source Data Integration, JSON Structuring & Transformation, Large Dataset Handling (200k+ records)

**MLOps & Model Deployment:** Docker, Kubernetes, MLflow, Weights & Biases, CI/CD Pipelines, API-based AI Services, Cloud AI Platforms (AWS SageMaker, Azure ML, GCP Vertex AI, Lightweight CNN Deployment for Mobile (Like MobileNetV2)), Model Optimization (Early Stopping, Checkpoints, LR Scheduling)

**Model Deployment & Monitoring:** Model Serving, API Integrations, Monitoring Pipelines, A/B Testing, Model Performance Tracking, Evaluation with Accuracy, Precision, Recall, F1-score, AUC, RMSE & R<sup>2</sup> for Regression Models, Trend Analysis of Sentiments

**Testing & Tools:** PyTest, Unit Testing, Postman, Swagger, Data Visualization (Matplotlib, Seaborn), Pivot Tables & GroupBy Analytics

**Version Control & Collaboration:** Git, GitHub, Bitbucket, Azure DevOps

**Project & Workflow Management:** Agile/Scrum, Jira, Trello, Azure Boards

## Work Experience

### Codonomy

Jan 2025 – Present

*AI Engineer*

*Islamabad, Pakistan*

- Designed and deployed an AI-powered Virtual Try-On SaaS platform, integrating computer vision (segmentation, pose estimation) and generative AI for real-time fashion visualization
- Built and productionized custom AI agents for sales and marketing automation using LangChain, LlamaIndex, and OpenAI APIs, automating lead engagement and improving response rates
- Implemented MLOps workflows (Docker, Kubernetes, MLflow, W&B, CI/CD) on AWS and Azure for scalable AI model deployment and monitoring
- Collaborated with cross-functional teams to integrate AI features into client-facing platforms, improving adoption and usability

### Codonomy

June 2024 – DEC 2024

*Junior AI Engineer*

*Islamabad, Pakistan*

- Developed and fine-tuned LLMs and RAG pipelines for business automation workflows
- Assisted in building real-time inference pipelines for computer vision and NLP applications
- Contributed to backend engineering with FastAPI and Node.js, exposing trained AI models via REST APIs

## Codonomy

Mar 2024 – May 2024

AI Intern

Islamabad, Pakistan

- Gained foundational experience in React.js, Angular, and ASP.NET Core development under mentorship of experienced professionals
- Gained hands-on experience in data preprocessing, augmentation, and evaluation (Accuracy, Precision, Recall, F1-score)
- Assisted in prototyping AI solutions for early-stage clients in healthcare, retail, and SaaS

## Freelancer (Fiverr & Upwork)

2021 – Present

AI Developer

Remote

- Successfully delivered 50+ projects including e-commerce platforms, social networking applications, and AI-powered solutions for international clients

## Key Projects

### AI-Powered Virtual Try-On System | Python, TensorFlow, OpenCV, React.js, Next.js, FastAPI, AWS SageMaker 2024 – 2025

- Designed and deployed an end-to-end SaaS platform for fashion e-commerce enabling users to virtually try on clothing
- Implemented computer vision pipelines (image segmentation, pose estimation, real-time inference) and generative AI models for photorealistic try-on results
- Integrated cloud MLOps workflows using Docker, Kubernetes, and SageMaker for scalable deployment and monitoring
- Built frontend interfaces in React.js/Next.js with secure authentication and seamless integration to backend APIs

### AI Agents for Sales & Marketing Automation | LangChain, LlamaIndex, OpenAI APIs, FastAPI, Azure ML 2024 – 2025

- Developed custom conversational AI agents to automate sales outreach, marketing workflows, and customer engagement
- Designed retrieval-augmented generation (RAG) pipelines for personalized responses using client and CRM data
- Implemented workflow automation including lead scoring, follow-up scheduling, and campaign analysis
- Deployed agents as API-based services, integrating with email and Slack to enhance business operations

### Vehicle Damage Detection | Python, TensorFlow/Keras, CNN, Image Augmentation 2024

- Developed a CNN model for detecting and classifying vehicle damages (scratches, dents, cracks)
- Preprocessed 7,000+ images using augmentation techniques (rotation, zoom, flip)
- Applied early stopping, checkpoints, and learning rate reduction to optimize performance

### Skin Disease Detection | Python, TensorFlow, Transfer Learning (MobileNetV2) 2023

- Built a medical image classification system using pre-trained CNN architectures
- Applied transfer learning with dermoscopic image datasets to identify multiple skin diseases
- Implemented data augmentation and class balancing to improve accuracy

### Sentiment Analysis on Airbnb Reviews | Python, Pandas, NLTK, TextBlob, Seaborn 2023

- Processed 400k+ Airbnb customer reviews with text cleaning, tokenization, and lemmatization
- Applied NLP sentiment classifiers (TextBlob, Naive Bayes, VADER) to determine polarity and subjectivity
- Visualized insights with frequency distributions, histograms, and word clouds to identify customer satisfaction trends

## Other Projects

### Hotel Management – Customer Churn Prediction | Python, NLTK, TextBlob, WordNet Lemmatizer 2023

### Image Detection & Classification (CNN) | Python, OpenCV, TensorFlow 2023

### Eye Detection Gesture-Based Video Player | Android Studio, OpenCV 2023

### Diamond Price Prediction | Python, Pandas, Scikit-learn (Linear Regression) 2022

### Gold Price Trend Analysis | Python, Pandas, Time-Series Analysis 2022

### LinkedIn App Reviews Sentiment Analysis | Python, NLTK, TextBlob, Naive Bayes 2022

### Olympic Athletes Dataset Analytics | Python, Pandas, Data Cleaning 2021

### Thanksgiving Dinner Survey Insights | Python, Pandas, Pivot Tables, Categorical Analysis 2021

## Education

### University of Haripur (UOH)

Sep 2020 – Jun 2024

Bachelor of Science in Artificial Intelligence

CGPA: 3.47/4.0

### POF Institute of Technology, Wah Cantt (POFIT)

Sep 2017 – Jun 2019

Diploma of Associate Engineering (DAE), PBTE Lahore

CGPA: 3.69/4.0