Fahd Ahmad

UAE Government Sponsored Golden Visa Resident of Abu Dhabi, United Arab Emirates

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Education

National University of Sciences and Technology (NUST)   **Graduated June 2025**
Bachelor of Engineering, Software Engineering   *Islamabad, Pakistan*

− Final Year Design Project: Next-Gen Prosthetics: AR Customization and Visualization App

Cambridge High School   **Graduated 2021**
A-Level, AS-Level, and IGCSE   *Abu Dhabi, UAE*

− A-Level: 1A* 2A's (September 2020 - June 2021)
− AS-Level: 5 A's, including self-taught Further Mathematics (September 2019 - June 2020)
− IGCSE: 8 A*'s, including self-taught Business Studies (September 2018 - June 2019)

Work Experience

Machine Learning Intern   **August 2024 – September 2024**
nanoVoltz Smart Systems Development   *Abu Dhabi, UAE*

− Developed an advanced AI-powered chatbot using Python, implemented Natural Language Processing capabilities with spaCy for intent recognition and entity extraction
− Integrated complex APIs, messaging platforms, and implemented secure backend processes
− Gained hands-on experience in machine learning and the software development lifecycle

Digital Division Intern   **June 2024 - July 2024**
ADNOC Offshore, ADNOC Group   *Abu Dhabi, UAE*

− Developed and customized Power BI dashboards for various departments, enhancing data visibility and decision-making processes
− Planned strategic enhancements focused on AI, ML, and NLP technologies
− Collaborated across departments to gather requirements and present innovative ideas in weekly knowledge-sharing meetings

Projects

Stock Market Prediction MLOps Pipeline: Production-Ready AI Trading System —
Python, MLflow, Optuna, Streamlit, Yahoo Finance API   **Personal Project, June 2025**

− Built a complete end-to-end MLOps pipeline for stock market prediction with automated data collection, 146+ technical indicators (RSI, MACD, Bollinger Bands), and hyperparameter optimization using Optuna
− Achieved 81.7% AUC score on financial forecasting with production-grade monitoring, data drift detection, and automated retraining capabilities
− Deployed interactive Streamlit web application with real-time predictions and integrated MLflow for experiment tracking and model versioning

Next-Gen Prosthetics: AR Customization and Visualization App —
Flutter, ARKit/ARCore, MediaPipe, AR Visualization   **Final Year Design Project, NUST, May 2025**

− Developed an innovative Augmented Reality application integrating MediaPipe-powered pose estimation with real-time AR visualization for prosthetic limb customization using Flutter with ARCore/ARKit
− Achieved clinical-grade measurement accuracy within ±1.2cm and maintained stable AR rendering at 28+ FPS with automated body measurement algorithms and age-adaptive scaling
− Implemented detailed real-time prosthetic customization capabilities, receiving positive validation from healthcare professionals across multiple medical specialties

SecureAdaptive: Dynamic File Security System —
Python Flask, SQLite, Trust Scoring   **NUST, December 2024**

− Developed an innovative secure file storage system with adaptive security mechanisms using Python Flask & SQLite
− Implemented a novel trust score system that dynamically adjusts user privileges based on behavior patterns
− Incorporated robust authentication, multi-level file encryption, and comprehensive activity logging
− Demonstrated security resilience through penetration testing of multiple attack vectors

IoT-based Weather Station: Environmental Monitoring System —
ESP32, ThingSpeak, ARIMA, Machine Learning **NUST, December 2024**
- Developed a comprehensive IoT weather monitoring solution with ESP32 microcontroller, DHT22 sensor, and ThingSpeak cloud platform
- Implemented advanced analytics including machine learning models for pattern recognition and anomaly detection
- Created ARIMA-based forecasting system with real-time alerts through webhook integration
- Designed mobile application support and comprehensive data visualization dashboards

SmartFeed: AI-Driven Personalized News Aggregator —
Python Flask, React, NLP, MongoDB **Personal Project, September 2024**
- Developed an advanced AI-powered news aggregator using Python Flask for the backend and React for the frontend
- Implemented natural language processing techniques including sentiment analysis, named entity recognition, and topic modeling using libraries such as NLTK and spaCy
- Integrated with NewsAPI for real-time news fetching and utilized MongoDB for efficient data storage

AI-Powered Chatbot —
Python, spaCy, NLP, Telegram API **nanoVoltz, August 2024**
- Developed an advanced NLP-based chatbot using Python with intent recognition and entity extraction capabilities
- Integrated with a complex API backend and utilized spaCy for NLP tasks
- Implemented custom pattern matching and fuzzy matching for improved intent classification
- Integrated with Telegram for user interaction

Power BI Dashboards —
Power BI, Data Visualization **ADNOC Group, July 2024**
- Designed and implemented interactive Power BI dashboards for various departments at ADNOC Group
- Enhanced data visibility and decision-making processes through effective data visualization

Emotion Detection through Facial Expressions —
Deep Learning, CNN, VGG16, ResNet50V2 **NUST, May 2024**
- Developed an advanced emotion detection system using deep learning, employing CNNs (VGG16, ResNet50V2, and custom architectures) on the FER2013 dataset, achieving 87.7% accuracy with an optimized VGG16 model
- Implemented comprehensive data preprocessing, transfer learning techniques, and model evaluation
- Explored applications in human-computer interaction, virtual reality, and mental health monitoring

PrivX - Privacy-Focused Social Platform —
React, TypeScript, Firebase **NUST, January 2024**
- Developed a new social networking application aimed at improving digital interactions in Pakistan by prioritizing user privacy and freedom of expression
- Implemented end-to-end encryption, decentralized moderation, and real-time communication features
- Created a secure and empowering community-driven platform

Zash - E-commerce Platform for Authentic Makeup Products —
Laravel, MySQL, Bootstrap **NUST, January 2024**
- Developed a secure e-commerce platform specializing in authentic makeup products
- Implemented features for product authenticity verification, secure transactions, and an intuitive user interface
- Utilized MVC architecture and incorporated testing frameworks like Locust and PHPUnit for robust quality assurance

Nuvexa Photos: Cloud-Based Photos Storage Solution —
React, Node.js, MongoDB, GCP, Kubernetes **NUST, January 2024**
- Developed a microservices-based web application using React, Node.js, and MongoDB
- Deployed on a Google Cloud Platform (GCP) Kubernetes cluster
- Integrated Skaffold for Continuous Integration/Continuous Deployment (CI/CD) automation
- Utilized Locust for load testing to ensure high performance and scalability

Skills

Data Science & ML Libraries	TensorFlow, Keras, PyTorch, Scikit-learn, MLflow, Optuna, MediaPipe, NumPy, Pandas, Matplotlib, Seaborn, spaCy, NLTK, fuzzywuzzy, statsmodels (ARIMA)
AI & NLP Technologies	Natural Language Processing (NLP), Computer Vision, Pose Estimation, Sentiment Analysis, Named Entity Recognition (NER), Text Classification, Recommendation Systems, Pattern Recognition, Anomaly Detection, Hyperparameter Optimization, Experiment Tracking, Model Versioning
Programming Languages	Python, Java, C/C++, JavaScript, Verilog, SQL, Dart, PHP, MATLAB
Web Technologies	React, Flask, Laravel, Flutter, Streamlit, HTML5, CSS3, Tailwind CSS, Markdown
Databases & Cloud	MySQL, MongoDB, SQLite, Firebase, Cloud Firestore, Google Cloud Platform, ThingSpeak
Development Tools	Git, GitHub, Visual Studio Code, Jupyter Notebooks
APIs & Data Formats	RESTful APIs, Yahoo Finance API, Telegram Bot API, NewsAPI, Firebase API, JSON, Regular Expressions
Security	Authentication Systems, Trust Scoring, Multi-level Encryption, Penetration Testing
IoT & Hardware	ESP32, Sensor Integration, Real-time Monitoring, Webhooks
3D Modeling & Design	AutoCAD, Autodesk Inventor, Figma, Blender
Other Tools	Microsoft Power BI, Arduino IDE, Proteus Simulation, ModelSim, Cisco Packet Tracer, Wireshark

Professional Certifications & Courses

- Google Cybersecurity - Coursera   (September 2023)

- Google Project Management - Coursera   (September 2023)

- Google Data Analytics - Coursera   (August 2023)

- Google Digital Marketing & E-commerce - Coursera   (August 2023)

Major Recognitions

- UAE Golden Visa Recipient - "Outstanding High School Graduates" category   (September 2022)

- Middle East IGCSE Awards 2019 - "A-star Club" and "School Toppers"   (November 2019)

- World Distinction in Gauss and Cayley Contests by University of Waterloo, Canada   (2015, 2016, 2018)

Leadership & Extracurriculars

- Liaison Executive in NUST Digital Club   (September 2022 - June 2023)

- Deputy Head Boy for Cambridge High School   (September 2020 - July 2021)

- "Best Delegation" at Cambridge Model United Nations   (January 2020)

- "Best Speaker" at Economics Debate, Cambridge High School   (February 2018)

- Smile Ambassador for Operation Smile UAE (12+ volunteering hours)   (September 2017 – July 2021)