ABUBAKAR IMRAN

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SUMMARY

Software Engineer with hands-on experience in AI/ML development, full-stack applications, and system integration. Strong foundation in software engineering principles, debugging, and agile collaboration. Eager to contribute to multi-disciplinary teams and expand skills across AI, product development, quality assurance, and security while delivering efficient, reliable, and scalable software solutions.

PROFESSIONAL EXPERIENCE

SimpleTalk.AI (AI Automation and Prompt Specialist)   **June 2025 - Oct 2025**

- Designed and optimized prompts for multi-channel AI agents, including voice, chat, SMS, and email, to enhance accuracy and user engagement.
- Developed and tested LLM-driven conversational workflows, ensuring consistent, context-aware interactions across platforms.
- Built automation pipelines using GHL to streamline business operations.

MachVIS Lab, SEECS NUST (Research Assistant)   **Jan 2025 - Present**

- Developed deep learning models for Land Use Land Cover (LULC) classification and crop mapping using remote sensing imagery and hybrid LSTM architectures for temporal data analysis.
- Evaluated model performance across temporal and regional domains to assess generalization and transferability.

Soft Pyramid (AI Engineer Intern)   **June 2024 - Sept 2024**

- Trained Llama3 on company policies using OpenWebUI, enabling HR to retrieve information efficiently through natural language interaction.
- Automated employee attendance system by integrating Llama3, allowing seamless leave requests and attendance tracking.
- Implemented Retrieval-Augmented Generation (RAG) using LangChain for accurate document-based question answering.

CODSOFT (Web Development Intern)   **Aug 2023 - Sept 2023**

- Developed and maintained core features of an e-commerce platform using the MERN stack.
- Built secure user account, product management, and order processing modules to enhance customer experience.
- Implemented an admin dashboard for efficient product and order management.

EDUCATION

National University of Sciences and Technology (NUST), Islamabad   **Sept 2022 - Present**
Bachelor of Science in Computer Science (BSCS), 7th Semester

Government College University (GCU), Lahore   **2020 - 2022**
HSSC (F.Sc. Pre-Engineering), Marks: 1039/1100

The Educators Jinnah Campus   **2018 - 2020**
SSC (Matriculation), Marks: 1055/1100

SKILLS

ML and AI: LangChain, TensorFlow, PyTorch, Pandas, NumPy, Matplotlib, Scikit-learn OpenCV,
Development: NextJS, React, JavaScript, TypeScript, Node.js, ExpressJS, Tailwind, FastAPI
Databases: MongoDB, MySQL, PostgreSQL,VectorDB
Version Control and Languages: Git, GitHub, DVC, MLFlow, Docker, C, C++, Java, Python

PROJECTS

GlacioVision (Glacier Extent Monitoring and Prediction):

- Developing a deep learning framework integrating satellite imagery and climate data to monitor and predict glacier changes.
- Applied Transformer-based models for spatial feature extraction and temporal dependencies.
- Predicting next year's glacier masks and elevation to estimate changes in area and volume.

Facial Classification:

- Developed a face classification model using ResNet and EfficientNet architectures, applying transfer learning and data augmentation to improve accuracy.
- Built a modular PyTorch codebase with an automated prediction pipeline for efficient inference.
- Implemented hyperparameter tuning and optimization techniques to enhance model performance.

Faryaad-e-Rahmat (Community Service Web Application):

- Developed an application using React, and MySQL to facilitate community welfare initiatives.
- Built secure user authentication and account management features, including registration, login, password recovery, and profile management.
- Implemented fundraising modules allowing users to create, and monitor ongoing initiatives.
- Designed functionality enabling users to organize and volunteer for social service activities.

Road Scene Semantic Segmentation:

- Implemented a MobileNetV2-based DeepLabV3+ model with enhanced ASPP and SKFusion attention mechanism for urban road scene understanding using the Cityscapes dataset.
- Applied data augmentation and class-weighted loss to improve pixel accuracy and (mIoU).
- Developed a MLOPs pipeline for efficient model training, versioning, and performance monitoring.

NUST International Model United Nations: (NIMUN'25)   *https://nimun.vercel.app/*

- Built an event registration and management system Model United Nations conference using Next.js and TypeScript for 700+ participants.
- Integrated APIs for live data updates, image storage, and automated notifications.

Handwriting-Based Gender Classification System:

- Developed a classification system using both feature-based and image-based approaches.
- Engineered and optimized 7,000+ features for interpretability and model efficiency.
- Applied machine learning algorithms (Random Forest, SVM, XGBoost) with hyperparameter tuning and leveraged deep learning models (CNN, ResNet, EfficientNet) for feature extraction.

Lyrics Vista (National Anthem Analysis):   *https://lyrics-vista.netlify.app*

- Developed a Python Tkinter application to compare national anthems and generate new lyrics.
- Applied NLP techniques (TF-IDF) and K-Means clustering to identify patterns in anthem texts.
- Visualized results with word clouds, silhouette analysis, and plots using Matplotlib, and Seaborn.
- Built end-to-end pipelines for data processing, analysis, and interactive visualization.

CERTIFICATIONS

- Machine Learning Specialization issued by DeepLearning.AI
- Deep Learning Specialization issued by DeepLearning.AI
- McKinsey Forward Program issued by McKinsey & Company

LEADERSHIP AND EXTRA CURRICULAR :

- Organized Tech Avant Garde (TAG'24), NUST's largest tech meetup under Google Developer Student Club NUST (GDSC), coordinating workshops and talks by industry experts.
- Led marketing initiatives for tech events under Hack Club NUST, which includes Webverse with Huawei, Astera Data Integration Bootcamp, and seminars on Web 3.0, Cloud Security, and ML careers abroad.