

Asad Ali | Lead Full Stack Python Developer and AI/ML Engineer

Islamabad – Pakistan

📞 +92 306 0122333 • ✉️ asadalif18@gmail.com • 🌐 github.com/asadalif18
☎️ +92 3060122333 • Gender: Male Nationality: Pakistani

About Me

Seasoned AI and Full-Stack Engineering Leader with over 5 years of experience architecting and delivering high-impact, production-grade AI systems. I specialize in leading cross-functional teams to develop and deploy advanced solutions in machine learning, computer vision, NLP, and autonomous intelligent agents. My expertise lies in translating complex business challenges into strategic technology roadmaps, leveraging cutting-edge frameworks and cloud-native architectures to drive automation, innovation, and measurable business value. I am passionate about mentoring talent, fostering a culture of technical excellence, and staying at the forefront of AI advancements to build the next generation of intelligent applications.

Education and Training

National University of Technology (NUTECH)

Master of Science in Artificial Intelligence (AI)

<https://nutech.edu.pk/>

Islamabad, Pakistan

2024 – 2026

National University of Technology (NUTECH)

Bachelor of Science in Computer Engineering (CEN)

<https://nutech.edu.pk/>

Islamabad, Pakistan

2018 – 2022

Work Experience

Integrated Robust Solution

Senior Lead AI Engineer

Islamabad, Pakistan

June 2025 – Present

- Leading the design, development, and deployment of enterprise-grade AI/ML solutions, including customized chatbots, generative AI systems, AI automations, intelligent agents, and advanced computer vision applications.
- Managing and mentoring a cross-functional AI/ML team, fostering innovation, guiding research directions, and ensuring timely, high-quality project delivery.
- Collaborating with stakeholders to align AI initiatives with business goals, driving automation, innovation, and measurable organizational impact.

Max Tech

Software Engineer AI/ML

Islamabad, Pakistan

March 2024 – May 2025

- Lead the development and deployment of innovative AI/ML solutions, intelligent agents, custom chatbots and computer vision applications, driving project success and operational efficiency.
- Collaborate with cross-functional teams to integrate advanced AI functionalities into existing systems, ensuring seamless implementation.
- Optimize machine learning models for enhanced performance and scalability, achieving significant improvements in processing times and resource utilization.

Frontier Works Organization (FWO)

Senior AI/ML Research Associate

Islamabad, Pakistan

Jan 2025 – June 2025

- Led AI/ML research in aerial infrastructure monitoring, developed advanced object detection models, and enhanced performance through data augmentation.
- Implemented targeted training methodologies that significantly improved model performance and robustness.
- Directed deployment efforts and produced comprehensive strategic reports, ensuring successful project outcomes while upholding confidentiality and data integrity.

Centrox AI

AI & Machine Learning Engineer

Islamabad, Pakistan

September 2023 – February 2024

- Engineered custom chatbots with advanced prompt engineering and implemented GPU-accelerated fine-tuning for optimal performance.
- Developed seamless pipelines for adaptability and efficient operation.
- Led innovative computer vision projects, utilizing cutting-edge models for object detection and recognition.
- Created intuitive, user-friendly front-end interfaces for seamless operation across all projects.

Safe City Capital Command and Control Center

Islamabad, Pakistan

AI & Machine Learning Intern

June 2023 – September 2023

- Specialized in Computer Vision applications, developing 'ANPR,' 'Weapon Detection,' and 'Fire Detection' systems with custom model training.
- Created intuitive, user-friendly front-end interfaces for seamless operation in all projects.

Codeaza Tech Pvt. Ltd

Rawalpindi, Pakistan

Python Developer Intern

June 2023 – July 2023

- Specialized in web scraping and automation, developing efficient solutions that significantly contributed to data acquisition.
- Streamlined workflows for various projects, enhancing productivity and efficiency.

National Electronics Complex of Pakistan (NECOP)

Islamabad, Pakistan

Computer Architecture Intern

July 2021 – September 2021

- Contributed to the development of "logic locking," a hardware obfuscation technique for enhanced electronic device security.
- Led design and implementation efforts, ensuring effectiveness and reliability.
- Collaborated with engineers and researchers to successfully integrate hardware, providing robust protection against tampering and unauthorized access.

Licenses & Certifications

August 2025: AI Web Developer (Top 25%)

Certified AI Web Developer by TestDome, ranked in the top 25% globally through work-sample testing methodology that evaluates practical problem-solving and coding skills.

Certificate Link: [TestDome Certificate](#)

September 2023: Google Crowdsource Learning Community Program Graduate

Certified Google Crowdsourcing Learning Community Program graduate, showcasing dedication to advancing diversity and representation in ML datasets.

Certificate Link: [Google Drive Folder](#)

March 2023: Registered PEC Engineer

Certified PEC Registered Computer Engineer, recognized by the Pakistan Engineering Council for expertise in computer engineering and adherence to professional engineering standards.

February 2023: IBM AI Engineering Professional Certificate

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

February 2023: AI Capstone Project with Deep Learning

Certificate Link: [Coursera Certificate](#)

February 2023: Deep Learning with TensorFlow

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

February 2023: Deep Neural Networks with PyTorch (with Honors)

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

January 2023: Computer Vision and Image Processing Essentials

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

January 2023: Deep Learning Essentials with Keras

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

January 2023: Machine Learning with Python (with Honors)

Badge Link: [Credly Badge](#)

Certificate Link: [Coursera Certificate](#)

Featured Projects

Integrated Healthcare Management System with AI-driven Virtual Assistant: Designed and developed an Integrated Healthcare Management System (**MedAssist**) with an AI-driven Virtual Assistant, utilizing advanced NLP techniques to simulate patient-doctor interactions, diagnose illnesses, and recommend treatments. Implemented a comprehensive database and RESTful APIs for efficient patient data management, and created an intuitive front-end interface for a seamless user experience.

Project Link: [MedAssist Project](#)

Smart Alarm-Triggered Fire Detection System for Enhanced Security: Designed and implemented a cutting-edge Smart Alarm-Fire Detection System (**SAFDET**), leveraging custom model training to promptly detect fire and trigger alarms for enhanced security measures. Created an intuitive, user-friendly front-end interface for seamless operation.

Project Link: [SAFDET Project](#)

Smart Alarm-Triggered Weapon Detection System for Enhanced Security: Designed and implemented a cutting-edge Smart Alarm-Weapon Detection System (**SAWDET**), leveraging custom model training to promptly detect weapons and trigger alarms for enhanced security measures. Created an intuitive, user-friendly front-end interface for seamless operation.

Project Link: [SAWDET Project](#)

Intelligent Vehicle Number Plate Detection and Recognition System: Designed and implemented a comprehensive ANPR (Automatic Number Plate Recognition) system with custom model training. Integrated OCR for precise vehicle registration number extraction and saved the data into an SQL database. Created an intuitive, user-friendly front-end interface for seamless operation.

Project Link: [ANPR Project](#)

Honors and Awards

April 2023: Winner of the 3rd Engineering Capstone Expo-2022 Award

Awarded by Pakistan Engineering Council (PEC)

Recognized for developing an award-winning project that integrated facial recognition, face mask detection, weapon detection, and safety helmet detection through customized model training on the NVIDIA Jetson Nano. Utilized the Oak camera for real-time surveillance, triggering instantaneous alarms upon detecting any target.

March 2022: Project Exhibition Winner (GIKI NEO-22)

Awarded by Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI)

Achieved top honors at the GIKI NEO-22 Project Exhibition for presenting a cutting-edge project that implemented intrusion detection using the Oak camera and Python programming, showcasing expertise in innovative security solutions.

February 2020: NUTECH Career Acceleration Program (NCAP) Award

Awarded by National University of Technology (NUTECH)

Participated in the NCAP, engaging in expert-led workshops and training sessions designed to enhance personal development, refine career skills, and cultivate a competitive edge for future professional endeavors.

Technical Expertise

Core Languages: Python (Expert), JavaScript (Proficient)

Artificial Intelligence / Machine Learning: **Specialization:** Generative AI (LLMs, Agents, RAG, STT, TTS), Natural Language Processing (NLP), Computer Vision (CV), Predictive Modeling

Frameworks & Libraries: TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, SpaCy, Hugging Face Transformers

AI Tools & Orchestration: LangChain, LangSmith, LangGraph, CrewAI

AI Automation & Workflow Orchestration: **Automation Platforms:** n8n, Zapier

Cloud & DevOps: **Platforms:** AWS, GCP, Azure, Vertex AI

Containerization & Orchestration: Docker, Kubernetes

CI/CD & IaC: Jenkins, GitHub Actions, GitLab CI, Terraform

Version Control: Git

Backend Engineering: **Frameworks:** Django, FastAPI, Flask

API Design: RESTful APIs, GraphQL

Testing & Documentation: Test-Driven Development (TDD), Pytest, Unittest, Postman, Swagger/OpenAPI

Data Engineering: Databases: PostgreSQL, MySQL, MongoDB

Data Processing & Analysis: Pandas, NumPy, SciPy

Data Acquisition: Web Scraping BeautifulSoup, Selenium

Visualization: Matplotlib, Seaborn, Plotly

Frontend & Prototyping: Web Technologies: HTML5, CSS, JavaScript, React, Bootstrap

Rapid Prototyping: Streamlit, Gradio

Others: Linux, Microsoft Office, Project Management, Research & Development

Additional Information

References available upon request.