Syed Ali Mughees Mehdi

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Professional Profile

AI and software engineering leader with nearly 10 years of experience delivering production systems across financial data, agentic LLMs, computer vision and SaaS. Combines hands-on technical expertise with multi-pod leadership and a record of improving model accuracy, system reliability and production performance.

Core Technical Expertise

Applied AI: PyTorch, TensorFlow, document AI, computer vision, OpenCV, YOLO, NLP, model evaluation and fine-tuning.
Agentic LLM systems: function calling, structured outputs, RLHF, supervised fine-tuning, RAG and adversarial evaluation.
Production engineering: Python, Django, Flask, FastAPI, JavaScript, React, SQL, REST APIs, microservices and event-driven systems.
Cloud and data infrastructure: AWS, Azure, Docker, GitHub Actions, Redis, RabbitMQ, PostgreSQL and vector retrieval.

Professional Experience

Daloopa, Remote September 2025-Present
Senior AI Engineer

- Develop and improve Autotagger, Daloopa's multi-stage system for extracting and validating financial data across a source-linked platform covering 6,000+ public companies globally; Daloopa was selected as a native premium-data provider for OpenAI's ChatGPT for Financial Services in September 2026.
- Introduced document-type-aware processing and dynamic thresholding for snippet and row/column selection, increasing coverage by approximately 4% on targeted failure cases and improving overall accuracy by 2-3%.
- Added richer contextual signals to the next-generation End-to-End Autotagger, improving coverage by approximately 10-11% across diverse document types.
- Improved quarterly and annual period mapping and validation logic; contributed to the wider quarterly reduction in system error rate from 6.6% to approximately 4.3%.
- Built an end-to-end benchmarking toolkit covering coverage, accuracy, company-level analysis and series-transition tracking for a platform processing more than two million data points.
- *Technologies:* Python, PyTorch, TAPAS, LLMs, document AI, financial-data pipelines, AWS and PostgreSQL.

Turing, Remote - Contract May 2024-Present
AI Engineer - LLM Systems and Team Lead

- Lead engineering pods delivering agentic LLM post-training and evaluation programmes for enterprise clients.
- Lead technical review and delivery for function-calling workflows, schema-constrained JSON outputs and multi-step tool execution.
- Developed structured-output enforcement and adversarial prompt evaluation to identify reliability and downstream execution failures before delivery.
- Coordinate trainers and pod leads across two engineering pods and related RLHF and supervised fine-tuning campaigns involving enterprise workflows, code understanding and tool-integrated agents.
- *Technologies:* Python, Flask, LLMs, RLHF, supervised fine-tuning, function calling, APIs and model evaluation.

RootPointers, Lahore August 2021-February 2024
Senior Full-Stack Engineer and Technical Lead

- Led delivery of international AI products, including SmartMitt sports analytics, PhonicZoom educational technology and UK carbon-accounting platforms.
- Designed SmartMitt's OpenCV tracking pipelines, sensor-video fusion, backend APIs and dashboards for pitch speed, trajectory, release point and impact analysis.
- Helped achieve approximately 97% ball-tracking accuracy using more than 10,000 labelled samples with near-real-time feedback for coaches and athletes.
- Supported production deployment for US schools and Division I teams and led migration from on-premises infrastructure to Microsoft Azure; the resulting product generated more than $300,000 in recurring revenue.
- *Technologies:* Python, Django, Flask, React, OpenCV, NLP, scikit-learn, AWS and Azure.

xiQ Inc., United States - Remote January 2020-August 2021
Full-Stack Engineer

- Contributed to a major redesign of xiQ's AI-powered B2B platform from legacy services to scalable microservices and distributed queues on AWS.
- Built intelligent content-curation and prospect-personalisation modules for enterprise sales teams.
- Supported a platform used by Dell, Nutanix, Genpact and NTT DATA.
- *Technologies:* Python, Django, React, microservices, distributed queues, TDD and AWS.

Professional Experience (continued)

Datics, Lahore January 2019-January 2020

Backend Engineer

- Developed production backend services and APIs for multiple applications, including SparrowCharts social-media query analysis.
- *Technologies:* Python, Flask, Django and AWS.

GenITeam Solutions & Brain Games Studio, Lahore July 2016-December 2018

Software Engineer

- Built 3D simulation and real-time multiplayer mobile games for iOS and Android using Unity, C#, Photon SDK and physics engines.

Personal Technical Project

Scanium.ai 2025-Present

Creator and Lead Engineer - Pre-commercial personal project

- Independently designed and deployed an agent-powered website quality-assurance application with authentication, usage controls and customer-ready reporting.
- Built a browser agent that performs more than 100 checks per page across accessibility, SEO, technical quality, content, performance and AI visibility, capturing DOM, network, console and screenshot evidence.
- Implemented adaptive re-testing for dynamic interfaces, prioritised issue reports, audit history and project-level run management.

Open-Source Development

- **LangVio - Creator and Maintainer:** Developed a Python framework connecting LLMs with YOLO-based video-analysis workflows; the project has received 500+ GitHub stars. github.com/MugheesMehdi07/langvio

Community Leadership

- Designed and taught Python, AI and applied machine-learning courses through Hadi E-Learning in 2024, mentoring more than 100 students and professionals.
- Delivered a hands-on Python and AI workshop to more than 100 students at Superior University in 2024.
- Invited speaker at LCWU's government-backed E-Rozgaar programme and a GCU Lahore seminar organised through its ACM student chapter with IEEE student-chapter involvement in 2024.
- Featured speaker at AI NEXTGEN in 2024 and participant in a public AI discussion for the Qasim Ali Shah Foundation in 2025.

Research

- **Mehdi, Syed Ali Mughees.** "Cross-Cultural Emotion Recognition through Facial Expressions." TechRxiv preprint, 11 April 2025.
- Sole-authored research examining cultural bias and generalisability in automated facial-emotion recognition. DOI: 10.36227/techrxiv.174439533.38508136/v1

Education

MS in Data Science - Information Technology University 2017-2019
BS in Computer Software Engineering - PUCIT 2012-2016
MicroMasters in Data Science - UC San Diego, edX 2017-2018

Professional Development

Selected training in agentic AI, machine learning, deep learning, NLP, generative AI, prompt engineering and retrieval-augmented generation through Coursera, Udemy and DeepLearning.AI.

Selected Recognition

- Top Rated Plus freelancer on Upwork.
- Twice awarded an All-Pakistan Inter-University Chess Gold Medal.