

Farhat Ullah

Applied AI Researcher & Software Engineer • Prospective MS/MPhil applicant

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Academic profile

Computer Science graduate and software engineer with a co-authored publication in the Chinese Journal of Physics. My work combines applied scientific machine learning with practical experience in retrieval systems, AI-assisted workflows, evaluation, and software engineering. I am seeking MS/MPhil study that strengthens my research foundations and connects reliable AI with scientific and operational problems.

Research interests

- Scientific machine learning: physics-informed models, materials screening, and domain knowledge in data-driven discovery.
- Reliable AI evaluation: validation, reproducibility, interpretability, failure analysis, and deployment limits.
- LLM and agentic systems: retrieval-grounded generation, tool use, multi-step workflows, and human review.
- Research software: traceable experiments, comparable evaluation, and maintainable scientific tooling.

Education

Bachelor's degree in Computer Science

2019–2023

University of Malakand, Pakistan

Peer-reviewed publication

Khan, A., Saeed, M., Din, F., Ullah, F., & Ullah, S. (2026). *Physics-informed machine learning screening and validation of metal-organic framework/g-C₃N₄ heterojunction photocatalysts*. Chinese Journal of Physics, 103, 1881–1895.
[doi:10.1016/j.cjph.2026.07.025](https://doi.org/10.1016/j.cjph.2026.07.025)

Contribution: Methodology, formal analysis, validation, visualization, writing the original draft, and review and editing.

- Co-authored a physics-informed machine-learning study combining engineered descriptors, Random Forest and XGBoost models, SHAP interpretation, and feasibility constraints for materials screening.
- The collaborative study screened 20,152 structures, reported 0.912 ROC-AUC on 4,029 internal test structures and 98% top-50 precision, and shortlisted 983 candidates for further computational and experimental validation.
- External evaluation covered 17 MOF families. The results are computational screening evidence, not experimental confirmation.

Research and AI engineering projects

Private AI Knowledge Assistant with Nextcloud

2024

Integrated a self-hosted assistant with Nextcloud for retrieval from company documents within the organization's infrastructure, prioritizing data control and clearly scoped retrieval behavior.

AI SDR and lead qualification workflow

Built a multi-step workflow for inbound lead scoring and qualification, connecting AI-assisted decisions with outreach and CRM processes in a defined operational setting.

TABSAP Autonomous Content Engine

In development

Developing internal n8n and LLM-based tooling for repeatable content workflows. This is engineering work in progress, not a completed research study.

Selected software and enterprise work

TABSAP CRM

Early access

Lead product engineering for a Flutter, Laravel, and MySQL CRM covering customer records, deal stages, follow-ups, tasks, dashboards, and role-based team access. Windows and Android are available; iOS and macOS remain on the roadmap.

Odoo ERP and ZATCA integrations

Implemented Saudi e-invoicing, construction billing, bilingual invoicing, payment connectors, and operational workflows across Odoo engagements.

Professional experience

TABSAP Software Company

Apr 2024–Present

Founder & CEO | Technical leadership and hands-on engineering

Lead requirements, architecture, implementation reviews, delivery, and mentoring across software products, applied AI systems, Odoo ERP, and enterprise integrations.

Independent Full-Stack Consulting

2019–Mar 2024

Full-Stack Developer & Consultant

Delivered web applications, integrations, deployments, performance work, security improvements, and production support for international clients.

Selected contract roles

2021–2024

Apextal · iPlex Software Company · Technosoft Software Company

Worked on WordPress plugins, WooCommerce applications, backend features, themes, database workflows, and production troubleshooting.

Methods and technical skills

Research and AI: Python, scikit-learn workflows, model evaluation, SHAP interpretation, RAG, LangChain, LangGraph, n8n, vector databases, and reproducible reporting.

Software engineering: Python, PHP, TypeScript, JavaScript, Laravel, Next.js, React, Flutter, REST/GraphQL APIs, SQL, Git, CI/CD, Docker, and Linux.

Enterprise systems: Odoo, ZATCA Phase 2, WordPress, WooCommerce, payment integrations, PostgreSQL, MySQL, MongoDB, and Redis.

Recognition and languages

Recognition: Upwork Top Rated Plus with 100% Job Success, verified on the public Upwork profile on 30 September 2026.

Languages: English, Urdu, and Pashto.

Academic references and supporting records are available on request.