

Muhammad Raheel Anwar

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NUST, Islamabad, Pakistan

OBJECTIVE

Seeking a challenging position as a **Senior Generative AI Engineer** to apply my expertise in **Generative AI for Content, SEO/GEO Strategies, and Automated Humanization Pipelines**. My aim is to contribute to innovative projects at the intersection of intelligent automation, content engineering, and advanced AI architectures, leveraging generative AI to build scalable, human-centric content systems.

EXPERIENCE

- Systems Limited** *Nov 2025 – Present*
Islamabad, Pakistan
Consultant AI
 - Providing AI consultancy and developing enterprise-grade solutions leveraging LLMs, RAG architectures, and multimodal AI.
 - Collaborating with cross-functional teams to integrate AI-driven automation and insights into business processes.
 - Enterprise Chatbots & Automation:** Engineered scalable RAG-based chatbots using Azure AI Foundry and LangChain, automating customer support workflows and reducing response times.
 - MLOps & Infrastructure:** Implemented end-to-end MLOps pipelines on Databricks for model lifecycle management, ensuring reproducible training and deployment via Docker and Kubernetes.
 - Enterprise RAG & Technical Content Engine:** Built a large-scale RAG system for generating technical documentation and SEO-optimized knowledge base articles.
- Intelligent Robotics Lab, NCAI, NUST** *Mar 2025 – Nov 2025*
Islamabad, Pakistan
Senior Research Officer
 - Led research in Agentic AI and RAG-based systems, including VLM-based detection (FastVLM) and plant disease detection.
 - Foundational Urdu LLM:** Led the development of a custom Urdu Large Language Model, including tokenizer training, distributed pre-training on high-performance computing clusters, and fine-tuning for downstream tasks.
 - Juntendo University Medical System:** Architected a comprehensive medical advice system integrating VLM-based diagnostics and LLM-powered patient interaction, deployed as a full-stack mobile solution.
 - FastVLM & Plant Disease Detection:** Pioneered research in VLM localization (FastVLM) and developed a plant disease detection system achieving 28% higher accuracy than traditional CNNs.
 - Custom Voice Agents:** Developed real-time, low-latency conversational voice agents for university help desks, integrating GPT-4, ElevenLabs, and VAPI.
 - Academic & Humanized Text Pipeline:** Developed a pipeline for generating human-like, undetectable academic text for research papers.
 - MCP Insight Agents:** Created MCP servers for automated content ranking, reviews, and client reporting.
 - Automated Research Analysis:** Built a pipeline for analyzing technical proposals and research papers, generating comprehensive reviews and summaries.
 - Technical Proposal Generator:** Developed a system to assist in drafting and refining technical proposals using RAG and LLMs.
- Aqsa Bajwa SMC Ltd** *Jan 2024 – Mar 2025*
Islamabad, Pakistan
AI Consultant
 - Agentic Content Generation:** Built an autonomous blog post generation agent using Model Context Protocol (MCP) and WordPress integration, automating content creation and SEO optimization.
 - Generative Fashion Design:** Developed a dress design system using fine-tuned Diffusion models, coupled with an automated product upload pipeline that generates titles, descriptions, and SEO tags.
 - Inventory & Sales Intelligence:** Implemented predictive analytics for sales forecasting and inventory optimization, utilizing advanced regression models to drive data-backed business decisions.
 - ResumeParser:** Built an intelligent resume extractor using Spacy, OCR, and Llama models to automate candidate screening.
 - Automated Brand Content Ecosystem:** End-to-end automation for Instagram captions, SEO-friendly product descriptions, and titles.
 - Competitive Analysis System:** Automated the generation of competitive analysis reports and market comparisons to drive strategy.

- Sparkleo Tech** Apr 2024 – Sept 2024
 Mobile Development with AI Integration Islamabad, Pakistan
 - **AI-Integrated Mobile Ecosystems:** Integrated advanced AI modules into mobile applications, including next-word/sentence prediction engines, generative icon creation, and real-time voice recognition.
 - **Smart AAC Solutions:** Developed predictive communication systems for Augmentative and Alternative Communication (AAC) tools, significantly improving accessibility for users with disabilities.
 - **Adaptive Teaching Assistant:** Engineered a multi-agent educational assistant using LangChain and GPT-4o, featuring interactive quizzes and personalized learning paths.
 - **Voice-to-Humanized Text:** Converting voice notes into structured, human-like written content.
- IZBA - CAPABL** Aug 2022 – Dec 2024
 Researcher USA - Remote
 - **Autonomous Data Agents:** Deployed intelligent scraping and verification agents to autonomously aggregate and validate logistics data from diverse web sources.
 - **Supply Chain Predictive Modeling:** Developed robust machine learning models to predict missing values and forecast trends for 3PL and 4PL logistics providers, enhancing data integrity and operational planning.
 - Conducted extensive data preprocessing and analysis to support machine learning pipelines.
 - **SEO-Driven Data Mining System:** Created a comprehensive data mining system utilizing SEO-driven techniques and ranking strategies to extract actionable insights.
- Qureshi Creatives** Apr 2021 – Mar 2022
 Intelligent Web Application Developer Islamabad - Remote
 - **Intelligent Recommendation Engine:** Built a sophisticated web-based recommendation system for Lego toys and BrickLink products, utilizing collaborative filtering to personalize user experiences.
 - Implemented cross-platform web solutions with optimized performance and Firebase integration.
- NFC IET University** Sept 2020 – May 2021
 Lecturer Multan, Pakistan
 - Taught Mobile App Development and Game Development.
 - Mentored final-year projects in AR and interactive applications.
- Xufire Tech** Dec 2020 – Apr 2021
 Software Engineer Multan, Pakistan
 - Built mobile applications with maps, messaging, and payment integrations.
- Infotech4IT** Jun 2019 – Jul 2020
 Software Engineer Lahore, Pakistan
 - Developed UI components and integrated REST APIs for enterprise applications.
 - Participated in agile development and code reviews.

EDUCATION

- National University of Sciences & Technology (NUST)** Oct 2022 – Continue
 M.Sc. in Computer Science - GPA: 3.70/4.00 Islamabad, Pakistan
 - Thesis: *MCQs Generation Using Large Language Models: A Mixture-of-Agent Approach*
 - Relevant Coursework: Generative AI, Deep Learning, Machine Learning, Blockchain Technologies
- NFC Institute of Engineering & Technology (NFC IET)** Oct 2016 – Sept 2020
 B.Sc. in Computer Science - GPA: 3.49/4.00 Multan, Pakistan
 - Projects: *Believers Game* and *Dynamic Shopping App*
 - Relevant Coursework: Object-Oriented Programming, Algorithms, Operating Systems

PATENTS AND PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

- [S.2] Raheel Anwar et al. (2025). **MCQs Generation Using Large Language Models: A Review**. 1st revision manuscript under review for publication in *IEEE Access*. Submitted: July 3, 2025.
- [S.3] Raheel Anwar et al. (2025). **MCQsAgent: Towards Human-Level MCQs Generation via Collaborative Multi-Agent AI Framework**. 1st revision manuscript under review for publication in *Expert Systems With Applications*. Submitted: June 26, 2025.
- [S.1] Raheel Anwar et al. (2025). **Towards Agentic AI: A Systematic Review of LLM-based Multi-Agent Intelligent Systems**. Manuscript under review for publication in *Artificial Intelligence Review*. Submitted: June 11, 2025.
- [S.4] Raheel Anwar et al. (2025). **Plant Disease Detection Using Vision Language Models: A Comparative Study**. Manuscript submitted to *Precision Agriculture*. Submitted: July 7, 2025.
- [T.1] Raheel Anwar et al. (2025). **Improving MCQs Generation Using Large Language Models: A Mixture of Agents Approach**. Thesis.

SKILLS

- **AI & Machine Learning:** Agentic AI, LLMs, RAG, Finetuning, Deep Learning, Computer Vision, NLP, Multi-Agent Systems, Generative AI for Content, Automated Workflows, Advanced NLP, SEO Optimization Strategies, Content Analysis, Model Context Protocol (MCP)
- **Languages & Frameworks:** Python, TensorFlow, PyTorch, LangChain, OpenCV, Scikit-learn, C++, Dart, Java
- **MLOps & Cloud:** MLflow, Docker, Kubernetes, AWS, Azure, Databricks, AI Foundry, CI/CD
- **Web & Mobile:** FastAPI, Flask, Flutter (Integration), REST APIs
- **Databases:** PostgreSQL, MySQL, MongoDB, VectorDB, ElasticSearch
- **Research Skills:** Systematic Literature Review, Academic Writing, Experimental Design, Data Analysis

AWARDS AND RECOGNITIONS

- **Nominated for Best Methodology Award - MS Thesis** 2025
Graduate Studies Committee
 - Nominated for the Best Methodology Award for innovative approach in MS thesis research.
- **Entrepreneurial Marketing Course** 2023
Online Program
 - Delivered a 4-week online course focused on marketing strategies for startups and entrepreneurs.
- **"How to Start a Business" Online Session** 2023
Online Event
 - Hosted a live online session for over 100 participants on starting a business from scratch.
- **Guest of Honor - Freelancers Top Voice Event** 2022
International Islamic University (IIUI), Islamabad
 - Invited as Guest of Honor at the "Freelancers Top Voice" event organized by IIUI Islamabad.
- **"How to Build a Startup" Introductory Session** 2022
NANSUA University, Multan
 - Led a 4-week session introducing students to startup ideation, business models, and pitch preparation.
- **Freelancing Training Session for Women University, Multan** 2021
Women University, Multan
 - Delivered a 4-week freelancing training session aimed at empowering female students with remote work skills.
- **AI Talk Seminar** 2020
NFC Institute of Engineering & Technology (NFCIET), Multan
 - Delivered a seminar on the fundamentals and future of Artificial Intelligence.
- **Best Duo Final Year Project - Dynamic Adaptive UI App** 2020
NFC Institute of Engineering & Technology (NFCIET), Multan
 - Developed a dynamic and adaptive UI mobile app that can be converted into multiple domains like grocery, pharmacy, etc.
- **Finalist Winner, ICE 2019 - Deev: Ride Sharing App** 2019
Innovation and Creativity Event (ICE), NFCIET Multan
 - Finalist winner with "Deev", a ride-sharing mobile app built in Flutter.
- **Runner-up, ICE 2018 - Anonymous Web Browser** 2018
Innovation and Creativity Event (ICE), NFCIET Multan
 - Developed an anonymous and lightweight web browser as part of the Innovation and Creativity Event.

LEADERSHIP EXPERIENCE

- **Co-Founder & CEO** Sept 2024 - Present
Aqsa Bajwa Designer Clothing Brand, Islamabad 
 - Launched Aqsa Bajwa, a designer clothing brand with exclusive fashion collections.
 - Achieved PKR 1 million in sales within the first month of operations.
- **Founder & Product Lead** Jan 2022 - Present
InShort Tech (Edutech Startup), Islamabad
 - Founded InShort Tech, developing educational apps such as Courselfy, Scholarly, and InShort Quiz.
 - Delivered over 20+ mobile development projects for clients across education and productivity domains.
- **Founder & Brand Strategist** Apr 2021 - Present
Barcurs Premium Sunglasses, Islamabad 
 - Created Barcurs, a premium sunglasses brand targeting international markets including the US and Europe.
- **Founder & E-commerce Developer** 2020 - 2021
BlackWears Clothing Brand, Multan
 - Built BlackWears, a drop-shipping-based clothing store focused on casual wear and accessories.
 - Designed and managed an online store using Shopify, handling product sourcing and fulfillment.

VOLUNTEER EXPERIENCE

- **Smart Research Workshop: Tools & Strategies for High-Impact Publications** Aug 2025
Intelligent Robotics Lab (IRL), NCAI, Pakistan 
 - Delivered an AI-driven research workshop on literature review, reference management, and paper structuring, attended by students and early-career researchers nationwide.
- **Community Tech Mentor** Jun 2021 - Aug 2021
Punjab IT Board, Lahore, Pakistan 
 - Mentored under the Punjab Youth Internship Program, conducting workshops on mobile app development and freelancing basics for youth.
- **Online Education Volunteer** Apr 2020 - Jun 2020
Saylani Welfare Trust, Karachi, Pakistan 
 - Tutored students in computer science fundamentals during the pandemic, supporting Saylani's online education initiative.
- **Event Coordinator** Feb 2019 - Mar 2019
National Science and Technology Park (NSTP), Multan 
 - Coordinated a regional tech innovation fair, managing logistics and presentations for 30+ student startup teams.

CERTIFICATIONS

- **Credly Certifications (12 Total)**
- **Game Design and Development Specialization – Michigan State University**
- **Machine Learning – Stanford University**
- **Game Development for Modern Platforms – Michigan State University**
- **What is Data Science? – IBM**
- **Data Science Methodology – IBM**
- **Game Design and Development Capstone – Michigan State University**

ADDITIONAL INFORMATION

Languages: English (Fluent), Urdu (Native), Punjabi (Intermediate), Arabic (Beginner)

Interests: Gaming, Singing, Rapping, History, Exploring new tools in tech

REFERENCES

1. Dr. Shah Khalid

Assistant Professor, Department of Computing
School of Electrical Engineering and Computer Science (SEECS)
National University of Sciences and Technology
H – 12 Islamabad, Pakistan
Email: shah.khalid@seecs.edu.pk
Relationship: Thesis Advisor

2. Hafiz Syed Muhammad Bilal

Assistant Professor, Department of Computing
School of Electrical Engineering and Computer Science (SEECS)
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Email: bilal.ali@seecs.edu.pk
Relationship: GC Member