

NAVEED KHAN BALOCH

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OBJECTIVE

To leverage expertise in Agentic AI, multi-agent LLM systems, and SaaS product development to build intelligent, scalable AI solutions that automate complex workflows and drive rapid business growth in dynamic, innovation-driven environments.

CORE COMPETENCIES

Artificial Intelligence & Machine Learning

Deep Learning (CNNs, RNNs, Transformers), Supervised & Unsupervised Learning, Transfer Learning, Reinforcement Learning, Model Optimization, Feature Engineering, AI System Design

Large Language Models & Agentic AI

Multi-Agent Architectures (LangChain, LangGraph), ReAct/Reflection Reasoning, Tool & Function Calling, Retrieval-Augmented Generation (RAG), Contextual Memory Systems, Vector Databases (Pinecone, ChromaDB), Prompt Engineering, LLM Evaluation & Optimization

Natural Language Processing (NLP)

Transformers, Hugging Face, NER, Semantic Search, Text Classification, Summarization, Intent Detection, Information Extraction, Domain Adaptation

MLOps & AI Deployment

Model Packaging & Deployment (Docker, AWS SageMaker), RESTful AI APIs, CI/CD Workflows, Experimentation & Model Iteration, Production Inference Optimization, Scalable AI Architecture

SaaS Platforms & Product Development

End-to-End AI Product Lifecycle (Ideation → Design → Deployment), AI-Driven SaaS Integration, Automation Workflows (n8n, Zapier, Make.com), Cloud-Based AI Services, API Integration, Cross-Functional Collaboration

Programming & Frameworks

Python (Primary), PyTorch, TensorFlow, SQL, Git Version Control

PROFESSIONAL EXPERIENCE

AI Engineer (Top-Rated Plus) – Remote

2018 - Present

Upwork

- Architected and deployed end-to-end Agentic AI systems across healthcare, recruitment, EdTech, and automation domains.
- Designed multi-agent LLM architectures using LangChain/LangGraph with modular components for reasoning, tool-calling, memory, and retrieval.
- Built production-grade RAG pipelines (OpenAI + Pinecone/ChromaDB) enabling contextual summarization, semantic search, and intelligent Q&A.
- Developed autonomous AI Interviewer system with structured evaluation workflows (ReAct-style), reducing manual screening effort.
- Engineered booking automation systems integrating LLM decision layers with orchestration tools (n8n/Zapier).
- Designed scalable REST-based APIs, containerized with Docker and deployed on cloud infrastructure.
- Delivered measurable value by transforming manual processes into intelligent automation systems for international clients.

AI & NLP Engineer

2021 - Present

SkillSoft (USA)

- Designed and developed advanced technical courses in NLP, PyTorch, React, MLOps, Machine Learning, Deep Learning, and Generative AI.
- Translated complex AI concepts into structured, industry-aligned learning paths.
- Built hands-on, project-based modules covering model development, deployment, and MLOps pipelines.
- Integrated LLM workflows and modern AI engineering practices into enterprise learning systems.
- Strengthened AI curriculum for enterprise upskilling and workforce transformation.

NLP Engineer

Jan 2022 - Dec 2022

Synthesis Health (Canada)

- Led development of an AI-powered radiology report assistant generating *Impression* from *Findings*.
- Designed end-to-end ML pipeline including data preprocessing and transformer-based architecture.
- Achieved performance exceeding literature benchmarks based on ROUGE metrics.
- Implemented human-in-the-loop validation with radiologists for reliable clinical deployment.

AI & IoT Consultant

2024 - Present

Bluell AB (Sweden)

- Designed AI-driven automation systems integrating LLM workflows with IoT infrastructure.
- Developed intelligent monitoring solutions combining sensor data with AI analytics.
- Advised on scalable AI architectures for smart environments and industrial automation.
- Led system design for integrating edge devices with cloud-based AI services.

Assistant Professor – AI Systems & Intelligent Computing

2012 - Present

UET Taxila

- Led research in deep learning, computer vision, and speech recognition.
- Supervised AI-based projects in healthcare, NLP, and intelligent systems.
- Published 20+ peer-reviewed research papers in AI and intelligent computing.

SELECTED AI PROJECTS

RecrubotX – AI Hiring & Interview SaaS Platform Built an end-to-end Agentic AI hiring platform using LLMs for CV parsing, automated scheduling, and voice-based interviews. Developed evaluation pipelines for structured candidate scoring and reporting, significantly reducing manual screening effort and enabling faster hiring decisions.

Bokafy – Agentic AI Restaurant Booking Platform (SaaS) Developed a multi-channel (chatbot, voicebot, WhatsApp) RAG-based booking system using OpenAI, Pinecone, Node.js, and Supabase. Enabled real-time reservations and intelligent table management via a React dashboard, improving booking efficiency and customer experience.

Doctor BotX – Agentic AI Clinical Assistant Engineered a RAG-powered clinical assistant using LangChain, LangGraph, and Qdrant with voice integration (Deepgram, Whisper). Provided real-time AI support for diagnostics and treatment recommendations, reducing cognitive load for healthcare professionals.

EDUCATION

PhD in Computer Engineering, University of Engineering and Technology (UET), Taxila

MSc in Computer Engineering, University of Engineering and Technology (UET), Taxila

BSc in Computer Engineering, University of Engineering and Technology (UET), Taxila

PUBLICATIONS & PROFESSIONAL SERVICE

- 20+ peer-reviewed journal publications in Artificial Intelligence, Machine Learning, and Intelligent Systems.

- Reviewer for IEEE Access, Artificial Intelligence Review, and other indexed journals.
- Member, Pakistan Engineering Council (PEC).