

# Awais Khan Mughal

AI Team Lead

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## About

**AI-Driven Principal Software Engineer** with 9+ years of experience in AI, GenAI, cloud computing, and backend development. Specialized in Generative AI (GenAI), LLM fine-tuning, Retrieval-Augmented Generation (RAG), and predictive analytics. Proven expertise in developing enterprise-grade AI solutions, including LLM-powered chatbots, document intelligence systems, and data platforms. Skilled in NLP techniques using NLTK, Hugging Face, and LangChain, with hands-on experience in prompt engineering and contextual document understanding. Proficient in OpenAI GPT, Claude, Sonnet, and AWS-based AI deployments. A results-driven leader and mentor, passionate about transforming business processes through AI-driven automation and intelligent insights.

## Professional Skills

Category	Skills
Programming Languages	Python, JavaScript
Databases & Caching	MySQL, PostgreSQL, TypeSense, AWS-RDS, Redis Cache, Pinecone
Web Applications	PHP (Laravel, CodeIgniter (MVC, HMVC), WordPress), Custom Web Solutions
Design Patterns/Principles	Agile Development, SOLID, KISS, TDD, PHPUnit
Message Queues	RabbitMQ, Kafka
DevOps & Monitoring	AWS (EC2, ECS, AppRunner, Bedrock, RDS, Lambda, Route 53), CI/CD, Docker, Linux, New Relic
Version Control & Project Management Tools	Git, Jira
AI & ML	Generative AI (GPT – OpenAI, Claude, Sonnet 3.7), Hugging Face Transformers, LangChain, Prompt Engineering, AI/ML Algorithms, NLP, OCR, AWS Textract, LLM Workflows, RAG (Retrieval-Augmented Generation), Model Fine-tuning,

	Model Deployment, AI Workflow Automation, Agentic AI, AI Agents
Automation & Orchestration	N8N, Zapier

Work Experience

**DroxLabs**

**May 2025 - Present**

**AI Team Lead** *(April 2025 – Present)*

Leading AI initiatives and product development, with a focus on GenAI, document intelligence, and LLM-powered automation platforms. Oversaw the design, development, and deployment of multiple AI-driven applications leveraging AWS Bedrock, FastAPI, OpenSearch, and serverless infrastructure.

- Spearheaded development of GovDoc, an AI-based legal document analysis platform for government contracts, extracting structured insights, obligations, clauses, and generating visual org charts.
- Designed TI-AI (Treasure Island AI Guide), an interactive AI bot that evaluates business ideas based on the TIC\_SEQUENCE: *vision, businessOverview, marketSize, targetCustomers, valueProposition, usp, and businessModel*. Produces detailed investment-readiness and viability reports.
- Led the creation of Edge OCR AI, a scalable AI solution for extracting structured data from handwritten and printed documents. Combines AWS Textract and Bedrock to streamline form and record digitization.

**Ciklum**

**April 2021 - May 2025**

**Principal Software Engineer - AI** *(April 2021 - May 2025)*

Developed an AI-powered chatbot leveraging LLM fine-tuning and Pinecone vector search, integrating client documentation from Confluence for contextual responses.

- Deployed on AWS Lambda, utilizing S3 for storage and optimized embeddings with Pinecone for real-time retrieval.
- Designed a custom document classification system, fine-tuning models to enhance accuracy and relevance.
- Implemented CI/CD pipelines with Docker for seamless deployment, ensuring a scalable, cloud-native AI solution tailored to business needs.
- Built an OCR pipeline using Sonnet 3.7 for extracting text from diverse scanned documents.
- Developed a profile summarization and scoring system using Claude and OpenAI to streamline candidate evaluation.
- Created document information extraction tools using OpenAI for automated retrieval of structured data from unstructured formats.

- Engineered a hybrid LLM chatbot using OpenAI and Sonnet to provide intelligent support over enterprise knowledge bases.

## ZAM Software Solutions

March 2020 – March 2021

### Senior Developer

Developed and maintained high-performance data processing applications.

- Enhanced core products and automated intelligent email campaign workflows using integrated AI-driven components.

## Get Ranked Malaysia

April 2018 – March 2020

### Senior Developer

## United Nations Development Programme (UNDP)

May 2017 – March 2018

### Software Developer

## Education

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- **MASTER OF SCIENCE IN DATA SCIENCE (MS DATA SCIENCE)**  
SHAHEED ZULFIKAR ALI BHUTTO INSTITUTE OF SCIENCE AND TECHNOLOGY, ISLAMABAD, 2021  
  
Thesis: **Fraud Detection in Credit Card Online Transactions Using Machine Learning** -  
Developed a predictive model with 97% accuracy
- **BACHELORS OF SCIENCE IN COMPUTER SCIENCE (BS-CS)**  
Air University, 2016

## Certification

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- **AWS Certified AI Practitioner – 2025**  
Amazon Web Services (AWS)  
(Credential ID: 83d66cf315674d09aa47f58da535979a)
- **GenAI Engineer – 2024**  
CIKLUM



## Key Projects & Contributions

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- **GovDoc:** Delivered an advanced AI-based solution for analyzing government contract documents, extracting key legal terms, obligations, timelines, and compliance details. Included automated generation of detailed organizational charts for government clients.
- **TI-AI (Treasure Island AI Guide):** Developed a conversational AI platform that interacts with users to refine business ideas and generate strategic evaluation reports covering vision, market size, target customers, value proposition, USP, business model, potential risks, and growth opportunities.
- **Edge OCR AI:** Designed and developed an AI-powered document intelligence and digitization system that extracts structured data from handwritten and printed forms using AWS Textract and Bedrock. Integrated agent-based automation to summarize content and autonomously schedule appointments/events across multiple platforms and calendars.
- **AI-RAG Application:** Built a robust RAG-powered platform that evaluates candidate profiles and recommends tailored international university admissions based on user goals and academic background.
- **SecureBot:** Engineered a cybersecurity solution using AI/ML for real-time threat detection, monitoring, and proactive mitigation of anomalies in enterprise environments.
- **MyWorkpapers:** Integrated a domain-specific AI chatbot and document classifier using Pinecone and OpenAI, enhancing document retrieval and internal knowledge access.
- **Document Intelligence & LLM Projects:**
  - OCR pipeline using Sonnet 3.7 for text extraction.
  - Profile summarization and scoring engine with Claude & OpenAI.
  - Document information extraction using OpenAI for PDFs, images, DOCX.
  - Hybrid chatbot using OpenAI and Sonnet for contextual support.
- **ETL-Based DWH for Data Analytics:** Built PostgreSQL-based DWH and ETL for sales prediction using MLPRegressor; embedded insights via Hugging Face's BART.