# ALHAMZA IBRAHIM

**Darmstadt-Germany** 

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#### SUMMARY

Al Engineer specializing in LLM and RAG applications, MCP integration, and multimodal chatbots. Strong background in computer vision and data science, solid experience with Microsoft Azure, fluent in English and proficient in German.

#### **WORK EXPERIENCE**

Al Engineer

Jun. 2024 – Present

NTT Data B.S. Germany

Heidelberg, DE (Hybrid)

- Started part-time during M.Sc. studies; transitioned to full-time in April 2025
- Designing and building multimodal chatbots powered by RAG and MCP tools
- Utilizing Microsoft Azure tools and OpenAI services to provide End-to-End AI-based solutions
- Participating in and organizing Al-focused hackathons, including SAP Hack2Build and SICK Solution Hackathon

Data Scientist Oct. 2022 – Apr. 2024

NTT Data B.S. Türkiye

Istanbul, TR (Hybrid)

- Worked with LLMs to develop and optimize Generative AI based solutions including Agents and conversational Chatbots
- Developed and implemented core machine learning solutions across healthcare, finance, and retail domains
- Worked with Azure Cognitive Services and CNN-based models for Computer Vision solutions

#### **TECHNICAL SKILLS & LANGUAGES**

Programming Languages: Python, Java, C/C++, R, SQL, MATLAB

Cloud Services and Tools: Microsoft Azure, SAP BTP (Intermediate), AWS (Intermediate), PromptFlow, Docker

Frameworks: FastAPI, FastMCP, LangChain, Flask, PyTorch, TensorFlow, Scikit-learn

Language Skills: English: Fluent | Turkish: Fluent | German: Working Proficiency | Arabic: Native

# **PROJECTS**

# IT.Worker Assistant | CLAAS

Azure OpenAI, FastAPI, FastMCP, RAG, TTS/STT

A multimodal, voice-enabled assistant for production line workers supporting text, image, and voice interaction.

- \* Integrated RAG to access unstructured data sources such as SharePoint, manuals, and PDFs.
- \* Connected ERP data through MCP-based server for structured information retrieval.
- \* Implemented Azure Speech Services for speech-to-text and text-to-speech capabilities.
- \* Deployed as a scalable microservice on Azure Web App Service.

# **Vavacars Chatbot | End-to-End Project**

GPT, FastAPI, Langchain, Ada, Pinecone, BERT

A car sales-focused chatbot powered by GPT that provides answers from FAQs and a cars database.

- \* Developed a RAG pipeline using Ada embeddings, Pinecone, and GPT.
- \* Fine-tuned a BERT model for intent recognition within the routing layer.
- \* Implemented a text-to-SQL agent to retrieve structured data from the database.
- \* Used Azure DevOps for version control and CI/CD workflows.

# Virtual Consultant | Internal Project

FastAPI, GPT, SAP, ABAP

An AI tool to assist the SAP team in preparing technical specifications (TS), writing ABAP code, and migrating ECC to HANA.

- \* Automated the preparation of TS documents based on user input and SAP guidelines.
- \* Generated ABAP code drafts directly from finalized TS content.
- \* Deployed the system as an API service on Azure Web Apps for internal use.

#### **EDUCATION**

# **Technical University of Darmstadt**

Darmstadt, DE

M.Sc. in Computer Science - Artificial Intelligence

Apr. 2024 - Oct. 2025

• Focus on AI, NLP, Deep Generative Models, Large Language Models, Database Systems

#### **Turkish-German University**

Istanbul, TR

B.Sc. in Computer Science - Informatics

Sep. 2018 - Jul. 2022

- Focus on AI, Machine and Deep Learning, Algorithms and Data Structures, Human-Machine Interaction
- Awarded The German Academic Exchange Service (DAAD) Scholarship for five years.

#### **CERTIFICATIONS & AWARDS**

**Microsoft Certificates:** Azure AI Engineer Associate | Azure AI Fundamentals | Azure Fundamentals **SAP Hack2Build (2025):** 2nd Runner-Up Award for IT.Worker Assistant Prototype

#### **HACKATHONS & COMMUNITY INVOLVEMENT**

# Hack2Build - SAP & AWS AI Co-Innovation Challenge (2025)

2nd Runner-Up

- Rebuilt IT.Worker Assistant using SAP BTP and AWS tools within one week
- Delivered a working prototype and pitch demonstrating LLM, RAG, and MCP integration

#### SICK Solution Hackathon - Coach & Jury Member

Freiburg, Germany

- Served as technical coach and jury member evaluating AI projects among 100+ participants from 24 countries
- Focus areas included Computer Vision, LLMs, and Robotics

# HackNOW by NTT DATA - Technical Coach

Bonn, Germany

- Mentored 10 teams (50+ participants) on AI implementation using Azure AI services and SAP BTP
- Supported event organization and case preparation for participant teams