

Mazen Ba Shammakh

Software & AI Engineer

Master's student in Informatics with hands-on experience in building enterprise-level AI-enabled systems. Experienced with Python, IBM Watsonx, and other tools through my academic projects and career projects. Passionate about operationalizing AI through building valuable AI-enhanced systems and contributing to the LLM research field by providing valuable results.

Contact

contact@mazenbashammakh.com

Links

github.com/MazenBaShammakh
mazenbashammakh.com

Education

M.Sc. Informatics

Technical University of Munich, Germany

- Major in Machine Learning, Minor in Software Engineering and Network Security (GPA: 1.89/1.0)

Apr 2023 – PRESENT

B.Sc. Computer Science

International Islamic University, Malaysia

- Specializing in Network Security (GPA: 3.94/4.0)

Feb 2018 – Oct 2022

Experience

Software Engineering Lead (Remote)

moria fund, Indonesia & Saudi Arabia

- Architected the financial infrastructure system for moria fund
- Lead the integration with 2 local banks to provide banking services for moria fund
- Developed the admin web dashboard using ReactJS
- Managed 3 developers remotely

Sep 2024 – Aug 2025

Software Engineer (Remote)

CoolRIOTS, Singapore

- Contributed to the development of the AI-enabled engine of the Business Execution (BeX) system
- Engineered prompts for intent classification & entity extraction for opcode handling
- Developed 8 API endpoints for our BeXOrchestrator API using FastAPI
- Trained 6 new developers in company's Business Execution (BeX) System development

Oct 2022 – Aug 2024

Software Engineer Intern (Remote)

CoolRIOTS, Singapore

- Developed a framework for handling requirements engineering and low-code platform development
- Improved conversational design for 3 bots using IBM Watson Assistant
- Implemented a PoC for Conversational UI & Graphical UI integration

Apr 2022 – Sep 2022

Skills

AI & Machine Learning

App Development

Tools & Platforms

Databases

Python (PyTorch), Prompt Engineering, IBM Watsonx, Hugging Face, OpenAI

Dart (Flutter), HTML, CSS, JavaScript (ReactJS, Node.js), Python (FastAPI)

Git (GitHub), Firebase, DigitalOcean, IBM Cloud

MongoDB, Redis, MySQL

Projects

Synthetic Data Generation

IDP at TUM Data Innovation Lab in collaboration with PwC Deutschland

Developed a project leveraging statistical methods and generative AI to create high-quality synthetic data only from statistical information and without access to real data.

Tech Stack: Python (Streamlit), OpenAI, GitHub, Weights & Biases

Apr 2024 – Sep 2024

Knowledge-grounded Dialogue System

Apr 2024 – Sep 2024

NLP Lab Course at TUM

Enhanced a knowledge-grounded dialogue system based on ReACT agents through advanced prompt engineering and information retrieval techniques.

Tech Stack: Python, OpenAI, GitHub, Hugging Face

mb Portfolio

mazenbashammakh.com

My personal portfolio website, showcasing my expertise in product design and software development, featuring interactive elements and a modern design to highlight key projects and skills.

Tech Stack: ReactJS, Firebase, Figma

Electronic Health Record System using Hyperledger Fabric

Apr 2024 – Sep 2024

Blockchain Seminar at TUM

Developed an Electronic Healthcare Record (EHR) system using Hyperledger Fabric, enabling secure data storage and transfer among healthcare stakeholders (doctors, patients, hospitals, and medicine producers).

Tech Stack: Flutter, Java, Hyperledger Fabric, GitHub

Passgorithm Mobile App

behance.net/gallery/138563201/Passgorithm-Password-Algorithm-Generator

A practical app designed to help users create secure and memorable password algorithms, providing a unique approach to personal cybersecurity.

Tech Stack: Flutter, Firebase, Figma

Achievements

React – The Complete Guide

Udemy Course

Nov 2024

McKinsey Forward Program

Online Program

May 2023

Alibaba Hackathon

Held in Riyadh, Saudi Arabia

Jan 2023

Promising Startup Award

Gold Prize for my Bachelor's Final Year Project

Feb 2022

Flutter & Dart

Udemy Course

Nov 2024

McKinsey Forward Program

Online Program

May 2023

Languages

English (C1) – German (A2) – Arabic (Native)