REEM SHARAF

Software Engineer | AI Researcher & Developer | University Lecturer

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PROFESSIONAL SUMMARY

Software Engineer, AI Researcher, and University Lecturer with 7 years of academic experience and a strong focus on Artificial Intelligence, Large Language Models (LLMs), and AI model training. Currently pursuing a Master's degree in Web Science with a specialization in Artificial Intelligence, conducting research on training, fine-tuning, evaluating, and improving AI models using Python. Experienced in software engineering, systems analysis and design, advanced computer science education, and academic project supervision, with strong programming skills in Python, C#, C++, and Java.

CORE COMPETENCIES

Artificial Intelligence, Large Language Models (LLMs), AI Model Training & Fine-Tuning, Model Evaluation & Optimization, Python Development, Software Engineering, Systems Analysis & Design, Distributed Systems, Compiler Design, Academic Research, University Teaching, Graduation & Academic Project Supervision

EXPERIENCE

University Lecturer - Al-Kalamoon Private University (On-site - Syria) **Sep 2019 - Present**

- Teach core and advanced courses within the Information Engineering program, including Software Engineering, Distributed Systems, Compiler Design, and Artificial Intelligence.
- Deliver practical instruction in complete Software Development Life Cycle (SDLC) processes, systems analysis and design, distributed system development using Java, compiler construction phases, and Artificial Intelligence using Python.
- Perform and supervise systems analysis for various academic projects, including requirements elicitation, functional requirements definition, use case modeling, and the development of analytical and design diagrams.
- Supervise graduation and semester projects, providing hands-on guidance in practical implementation, software design, and problem solving.
- Conduct training workshops for university administrative staff and contribute to academic and technical development activities.

Volunteer - Training & Career Center, Damascus University (On-site - Syria) **2017 - 2019**

- Contributed as a volunteer to the university's Training & Career Center, supporting a variety of organizational, student-focused, and operational activities.

KEY PROJECTS

Intelligent System for Generating Arabic University Course Content from Real Data Using AI - Master's Thesis: Designed and developed an intelligent system for generating structured Arabic university lectures from real academic course and reference data using Large Language Models (LLMs). Fine-tuned and evaluated Qwen3-8B for domain-specific lecture generation, incorporating dataset development, data augmentation, prompt engineering, ontology-based knowledge representation, and multi-agent AI workflows across multiple processing stages. Conducted research-oriented experiments and comparative evaluation to improve generation quality, with results currently being prepared for scientific publication.

Distributed E-Commerce Microservices System - Master's Course Project: Designed and developed a distributed online shopping system using C# and ASP.NET Core Web API, composed of Users, Products, Orders, and Payments microservices. Implemented Ocelot API Gateway for routing, authentication, authorization, and load balancing, with RabbitMQ for asynchronous inter-service communication and Round Robin request distribution.

TECHNICAL SKILLS

Artificial Intelligence & LLMs: Large Language Models (LLMs), Natural Language Processing (NLP), Agentic AI, Multi-Agent Systems, AI Model Training, Fine-Tuning, Model Evaluation & Optimization, Prompt Engineering, Data Augmentation, Qwen Models, Hugging Face, Transformers
Knowledge Representation: Ontology Development, Ontology-Based Knowledge Representation, Semantic Knowledge Organization
Programming Languages: Python, C#, C++, Java
Software Engineering & Systems Analysis: Software Development Life Cycle (SDLC), Requirements Analysis, Functional Requirements, System Analysis & Design, UML Modeling, Use Case Modeling, Analytical & Design Diagrams
Distributed Systems & Backend: Microservices Architecture, .NET, ASP.NET Core Web API, RESTful APIs, Ocelot API Gateway, RabbitMQ, Asynchronous Communication, Load Balancing, Authentication & Authorization, HTTP, JSON
AI Research & Evaluation: Experimental Design, Model Performance Evaluation, Comparative Analysis, Research Data Preparation, ROUGE, METEOR, BERTScore
Development Tools: Visual Studio Code, Google Colab, Postman, Thunder Client

EDUCATION

Master's Degree in Web Science | Artificial Intelligence Specialization | Syrian Virtual University | 2025 - Present
Bachelor's Degree in Information Engineering | Software Engineering Specialization | Damascus University | 2013 - 2018

CERTIFICATIONS

Academic Advising Training & Qualification | Al-Kalamoon Private University | Aug 2021
Version Control | Meta (Coursera) | Jan 2023
Programming with JavaScript | Meta (Coursera) | Dec 2022
Introduction to Front-End Development | Meta (Coursera) | Nov 2022

RECOGNITION

Certificate of Appreciation for Distinguished Cooperation in Academic Development | Faculty of Engineering, Al-Kalamoon Private University | Sep 2021

LANGUAGES

Arabic (Native) | English (Professional Working)