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# Sama Shalabi

[GitHub](#)

[LinkedIn](#)

## Education

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### An-Najah University

BSc. in Computer Science Apprenticeship Program (CAP)

Track AI

Nablus , Palestine

Sep 2021 - 2026

### Yasir Arafat School For Girls

technology(tawgih) - grade : 97

Nablus , Palestine

2020 - 2021

Relevant Coursework: Fundamentals of Artificial Intelligence, Advanced Topics in Machine Learning, Data Mining, Natural Language Processing(NLP), Big Data Engineering, web I (frontend specific), web II (backend specific), Programming Principles I & II (C++ specific), Data Structures, Algorithm Analysis and Design, Introduction to Probability Theory, Database Systems, Software Testing and Quality Assurance(QA)

### Microsoft

Develop AI solutions in Azure course

Completed: 2024

## Internship Experience

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### Asal Technologies: Mind Map Generator

AI Developer Intern

Built the summarization system for node topics using Azure AI summarization APIs.

Nablus, Palestine

july 2024 - sep 2024

## Projects

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### Road Sign Detection System (YOLO + ResNet) - [GitHub repo](#)

- Built a real-time traffic sign detection system using YOLOv8 for object detection and ResNet18 for image classification.
- Achieved high mAP scores at IoU thresholds of 0.5 and 0.75 > 90% ; conducted extensive evaluation on both bounding box precision and class accuracy > 90%.
- To be integrated with raspberry pi in the future to make toy cars detect the signs and make decisions based on it

### Automatic Essay Grading with Instruction-Tuned Transformers - [GitHub repo](#)

- Fine-tuned Mistral-7B-Instruct using Unislot & LoRA for grading student essays based on rubric-based datasets.
- Designed effective instruction-based prompts and contributed to model fine-tuning using Unislot and LoRA.
- Integrated model inference with a web-based interface using Flask, HTML, CSS, and JavaScript for user-submitted essay grading.

### Disease Prediction System - [GitHub repo](#)

- Designed and developed a complete disease prediction system for Diabetes, Hypertension, Bronchial Asthma, Allergy, and Common Cold.
- Used symptom-based input with a model of combined classification algorithms (SVM ,decision tree and random forest) to provide health condition predictions.
- Built using Python, pandas, scikit-learn, and Flask for deployment.

### Twitter Stream Processing (Scala + Spark) - [GitHub repo](#)

- Designed and implemented the data processing pipeline for real-time Twitter streams using Apache Spark and Scala.
- Performed data cleaning, normalization, and transformation to prepare tweets for sentiment analysis and visualization.
- Extracted relevant fields (e.g., text, hashtags, user info), removed duplicates, handled missing values, and applied text preprocessing (tokenization, lemmatization, stopword removal).
- Ensured smooth integration between Kafka (producer-consumer architecture), Spark Streaming, and downstream storage systems (e.g., Elasticsearch).

### Mind Map Generator (Azure AI) - [GitHub repo](#)

- Built the summarization module using Azure AI services to extract and summarize node topics from PDFs.
- Designed and implemented the mind map interface, including navbar and error page logic (front and back end).
- Stack: Flask, Azure APIs, HTML, CSS, JavaScript.

## Technical Skills

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**Programming languages :** C++, HTML, CSS, JavaScript, Python, scala.

**Frameworks & Libraries :** ReactJS, Node.js, Express, Bootstrap, Flask, Django, Spark , NumPy, pandas, Spark.

**Databases:** SQL, MongoDB.

**Tools:** Git, GitHub