

JOUDI ALKHRBOTLI

AI Engineer | Arabic OCR & Document AI | Instructor, Damascus University

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ABOUT ME

AI engineer specialising in Arabic document intelligence. At TEKANIA since January 2026: engineered 12M+ training lines and fine-tuned a 60M-parameter Arabic TrOCR model — 6.45% CER on the KITAB-Bench printed-Arabic line datasets, 3rd of 12 systems compared. Built Sanad, a Syrian property-document audit platform that took **first place at Demo Day, Syria Build Week 2026**.

SELECTED PROJECTS

Sanad — Syrian Property Document Audit | Independent

Oct 2026

- **First place, Demo Day — Syria Build Week** (Startup Grind Damascus × Replit); built from scratch in the five-day build week
- Reads a property file as a set: 20 checks run between documents (deed, registry extract, sale contract, power of attorney, inheritance certificate)
- One rule engine implemented twice, in two languages, held to 231 conformance tests; inheritance shares recomputed from first principles
- Outputs a risk score, procedural path, ownership chain, timeline and draft petition; issues no verdict on validity or forgery
- Live with five synthetic demo cases; public 24-question buyer checklist; anonymised observatory with a k=5 suppression threshold

Arabic Handwritten Text Recognition | Research, in progress

2026 – Present

- Building a real Arabic handwriting dataset: collection, line-level annotation, transcription, writer metadata, quality control
- Evaluation fixed before results: writer-independent and cross-dataset CER/WER; no results claimed yet

WORK EXPERIENCE

AI Engineer (OCR & Arabic NLP) | TEKANIA

Jan 2026 – Present

- Engineered 12M+ training lines and fine-tuned a 60M-parameter Arabic TrOCR recognizer
- Built the data layer: generation, cleaning, augmentation and Apache Arrow pipelines
- Built fixed test sets and a repeatable CER/WER benchmarking workflow; 6.45% CER on KITAB-Bench printed lines (3rd of 12 systems)
- Evaluated OCR models and commercial APIs on accuracy, speed and cost to support production decisions
- Built the FastAPI backend and React review interface for the OCR application
- Built an LLM-based accounting agent for internal financial workflows
- Set up GPU training and inference; onboarded and supervised new trainees

Instructor | Damascus University

Present

- Teaching at the university alongside full-time engineering work and MSc study

Freelance AI Engineer | Independent

2024 – 2025

- Research on scoring the Draw-A-Person assessment with CNNs across 23 labelled features, with art and psychology experts
- Two iterations under one pipeline: ~70% accuracy on 1,393 drawings (8 architectures), then 80.2% on 1,824 (MobileNet, MobileNetV2, InceptionV3, Xception)
- A research and screening aid — not a diagnostic tool

Programming Instructor | Fourth Center

2021 – 2022

- Taught programming logic and problem solving to young learners; coached students for competitions

EDUCATION

MSc, Artificial Intelligence | Damascus University

2026 – Present

- In progress, alongside full-time work

BSc, Informatics Engineering — AI Specialisation | Latakia University, Syria

2020 – 2025

- GPA 84.5% — ranked 3rd in the graduating class; Certificate of Excellence, 4th year (GPA 86.83%)

TRAINING

Shabab Mobtakeron | Egypt

Feb – Apr 2025

- Deep learning, computer vision and NLP; final project: real-time theft detection with automated alerts

Yasmeen AI | Remote, Turkey

Nov – Dec 2024

- Data science and machine learning: EDA, regression and predictive modelling

SKILLS

Arabic document AI: OCR, handwritten text recognition, text detection, TrOCR fine-tuning, Arabic text normalization, vision-language models

Data & evaluation: dataset engineering, synthetic data generation, Apache Arrow, CER/WER, benchmark design, cross-dataset evaluation, error analysis

Machine learning: Python, PyTorch, TensorFlow, Hugging Face Transformers, CNNs and transfer learning, OpenCV, GPU training

Product engineering: FastAPI, React, TypeScript, SQL, rule engines, LLM-based systems, bilingual right-to-left interfaces

LANGUAGES

Arabic: native • **English:** B2 upper-intermediate