

# SAHAR BELARBI

MACHINE LEARNING & COMPUTER VISION  
ENGINEER



## CONTACT

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## EDUCATION

2019 - 2022

NATIONAL ENGINEERING  
SCHOOL OF CARTHAGE

- National Engineering degree in computer science engineering

2017 - 2019

PREPARATORY INSTITUTE FOR  
ENGINEERING OF TUNISIA

- Preparatory studies in physics and chemistry

## SKILLS

- OpenCv, Pillow, YOLO, OCR, CNN, RNN, LSTM, GANs
- Pytorch, TensorFlow, Keras, Scikit, SpaCy
- numpy, Cupy, pandas
- matplotlib, seaborn
- Python, C++, Java
- Scum, Jira

## LANGUAGES

- Arabic (Native)
- French (Bilingual)
- English (Fluent)

## PROFILE

Dedicated machine learning engineer with two years of hands-on experience specializing in computer vision. I have been an integral part of challenging and innovative projects, collaborating with dynamic teams to create state-of-the-art computer vision solutions. I am always seeking opportunities to enhance my skills and contribute to impactful, cutting-edge technologies.

## WORK EXPERIENCE

### Trabotyx

Netherlands

NOV 2023 - PRESENT

Machine Learning Enigneer & Scrum Master

- **Machine learning:**
  - Led the development of a multi-input classification model that integrates geometric prior knowledge which enhanced the model's accuracy by 5%.
  - Fine-tuned the DaSiamRPN tracker by preparing custom datasets, adapting training scripts, and optimizing hyperparameters for enhanced tracking performance.
  - Conducted in-depth data analysis to determine optimal preprocessing methods for image classification, leading to improved model accuracy.
  - Worked on moving detection and classification to GPU using Cupy and CUDA kernels which reduced inference time for the whole pipeline by 10ms.
- **Scrum Master:**
  - Facilitated agile processes, including sprint planning, daily stand-ups, and retrospectives, which resulted in increasing team productivity.
  - Actively supported the team in identifying and removing obstacles, leading to quicker resolution of blockers and reducing project delivery time.

Python, Pytorch, Cuda, Cupy, TensorRT, ONNX, Optuna, CNN, ResNet18, DaSiamPRN, GitHub, Linux, Scrum, Jira

### OpenBee

Hammamet, Tunisia

Artificial Intelligence Engineer

- Optimized of a multilingual OCR engine (Latin, Arabic, Mandarin).
- Developed and optimized a barcode detection and recognition engine.
- Migrated production to use the latest versions of YOLO (from YOLOv5 to YOLOv8).
- Implemented Oriented barcode processing using YOLO-obb.
- Implemented a solution for detecting and recognizing text from sales receipts.

OCR, Tesseract, YOLO, OpenCV, Pytorch, Cuda, Python, C++, Java, Gitlab

### Michelin

Clermont-Ferrand, France

Feb 2022 - Aug 2022

Machine Learning intern: End of studies Internship

**Prediction of dynamometric properties of textile materials:**

- Explored the results already published for deep learning models used in the textile industry.
- Focused on deep learning and machine learning models and introduced a new approach to predict the properties of textile materials.
- Classified textile materials by type using deep learning models.
- Generated fake data: Increase data using tabular GANs.  
Tensorflow, Keras, Random Forest, SVM, MLP, ANN, GANS for tabular data, Python