

# Hamza Boulahia

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## WORK EXPERIENCE

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### Data Science Engineer

Aléria Consulting (May 2022 – Dec 2023)

- Developed a web application for webpage attention heatmap prediction
  - Training and testing a deep learning model to predict webpage saliency.
  - Achieving more than 85% accuracy on the Webpage Saliency public dataset.
  - Implemented a robust Python API for seamless model integration.
    - Skills: Python, U-Net, OpenCV, Flask
- Designed a Windows desktop application for ID Optical Character Recognition (OCR)
  - Creating and optimizing object detection models for efficient extraction of information from ID cards.
  - Applied advanced image processing techniques to minimize OCR errors.
  - Achieving accurate and reliable extraction of data from ID cards, and delivering product within due time.
    - Skills: Python, YOLO, OpenCV, Tesseract-OCR, PyQt5

### Freelancer

(Oct 2020 – Present)

- Creating and improving machine learning models using Python as per client's requirements.
- Performing exploratory data analysis to extract insights and delivering detailed reports.

### Math Tutor

Sigma Training Center (Oct 2016 – Aug 2018)

- Tutoring students in bachelor level mathematics (Calculus, Linear Algebra, and Convex Optimization).
- Incorporating visuals using Python to help students better understand certain math concepts.

## EDUCATION

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### Research Master in Mathematical Modeling and Scientific Calculations

National Engineers School of Tunisia (2014 – 2016)

### Bachelor of Science in Applied Mathematics

Higher School of Science and Technology of Tunis (2011 – 2014)

## CERTIFICATIONS

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- TensorFlow 2 for Deep Learning ([Coursera](https://www.coursera.org/learn/tensorflow-2-for-deep-learning) - Aug 2021)
- Deep Learning Specialization ([Deeplearning.ai](https://www.deeplearning.ai) - Oct 2020)
- Machine Learning ([Coursera](https://www.coursera.org/learn/machine-learning) – Apr 2020)
- Data Analyst Nanodegree ([Udacity](https://www.udacity.com/course/data-analyst-nanodegree) | October 2019 – Jun 2020)

## SKILLS

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**Languages:** Arabic (Native), French (Good Command), English (Good Command).

**Programming Languages:** Python (NumPy, Pandas, PyTorch, TensorFlow, Plotly, Streamlit), SQL, C, Matlab, Fortran.

**Computer Vision:** OpenCV, CNN, Vision Transformer, YOLO, Stable Diffusion.

**Tools:** Git, MySQL, PyQt5, Selenium.

## PROJECTS

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- **Web application for football video analysis** ([Github](https://github.com) | YOLOv8, OpenCV, Streamlit):

Creating a web application for football object detection with team prediction and tactical map representation.

- **Customized chatbot web application** ([Github](https://github.com) | GPT-3.5, Gradio, Tacotron 2):

Creating a chatbot web application for lyrics generation and speech synthesis using deep learning model for voice cloning.

- **Web scraper for job offers on LinkedIn** ([Github](https://github.com) | Python, Selenium):

Creating a web scraper to collect job offers data based on a job title and location, and save the extracted data in csv files.

## INTERESTS

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Reading, educational videos creation, freelancing on Fiverr & Upwork, and calisthenics workout.