BOUKHARI AIMEN

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SUMMARY

As a dedicated student at the Higher School of Computer Science ESI, I am deeply engaged in the field of Artificial Intelligence and Computer Vision. My technical proficiency spans multiple programming languages and frameworks, including the MERN stack (MongoDB, Express.js, React, Node.js), Django, and Flask. I am adept at developing robust AI models and deploying them effectively. My passion for technology drives me to constantly seek innovative solutions and contribute to the advancement of the AI field.

PROJECTS

Smart Farming App - Agritech (2CP Project) 2023

- **Description:** Developed a smart farming application aimed at enhancing agricultural productivity through AI and data analytics.
- **Technologies Used:** MERN stack (MongoDB, Express.js, React, Node.js), Machine Learning algorithms, Python.
- **Role :**

1. Built AI models for crop prediction and irrigation management.
2. Developed the admin page for managing application data and user access.
3. Collaborated with team members to integrate machine learning models into the application.

Anemia Detection Model (GDG Datathon) 2023

- **Description:** Developed an AI model to detect anemia from eye images during a Datathon hosted by Google Developer Groups (GDG).
- **Technologies Used:** Python, OpenCV, TensorFlow/Keras.
- **Role:**

1. Built and trained the CNN for detecting anemia from eye images.
2. being project leader give me a lot of experience (in team management , time ...et)
3. Preprocessed the dataset to improve model performance.
4. Collaborated with team members to fine-tune the model and present the results.

Bone Fracture Detection using R-CNN Family 2024

- **Description:** Built a Faster R-CNN model to detect bone fractures in X-ray images with high precision.
- **Technologies Used:** PyTorch, Faster R-CNN, torchvision, Python, Medical Imaging
- **Role:**

1. Developed a deep learning model for detecting bone fractures in X-ray images using the R-CNN family (Faster R-CNN).
2. Achieved competitive mean average precision (mAP) on validation data with custom preprocessing and augmentation pipelines.

Implemented Transformer Architecture from Scratch 2024

- **Description:** Implemented the full Transformer model from scratch, including attention mechanisms and encoder-decoder architecture.
- **Technologies Used:** PyTorch, Python , Numpy ,
- **Role:**

1. Implemented both encoder and decoder modules manually to understand the internal mechanics of attention-based models.
2. Built the Transformer architecture from the ground up, including self-attention, positional encoding, multi-head attention, and feed-forward networks.

Plant Disease Detection using SSD300 (Zindi Competition) 2024

- **Description:** Developed an SSD300 object detector from scratch to identify plant diseases in images for a Zindi competition.
- **Technologies Used:** PyTorch, Python , Numpy ,
- **Role:**

1. Reimplemented the SSD300 object detection model from scratch for a Zindi competition on plant disease detection.
2. Trained and evaluated the model on real-world field images, achieving solid performance in multi-class disease localization.

EDUCATION

Farhat abbas secondary school (BBA)

- baccalaureate degree with a 17.21/20 in the mathematics field

Eecole national superieur d'informatique-sidi bel abbes **Sep 2022- Aug 2024**

- 2 years

ecole national superieur d'informatique (ESI)-alger **Aug 2024- Until now**

- engineering in computer science + Master degree

SKILLS

- Python, Pascal, Java, JavaScript, C
- React.js, Flowbite, Tailwind CSS, Bootstrap, Node.js, Express, Flask, Django
- Pandas, NumPy, TensorFlow, Matplotlib, Seaborn, scikit-learn, Keras, PyTorch, OpenCV, Hugging Face
- Git, GitHub, Google Colab, Docker
- Canva, Figma, LaTeX
- SQL, MongoDB

CERTIFICATIONS

Advanced Computer Vision with TensorFlow 2023

- Coursera , DeepLearning.ai

Natural Language Processing with Classification and Vector Spaces 2023

- Coursera , DeepLearning.ai

Disaster Risk Monitoring Using Satellite Imagery 2023

- Nvidia

LANGUAGES

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