Imen Selmi
Computer Science Engineer

Fresh graduate with a strong academic background in deep learning , machine learning and computer science . Passionate about developing cutting-edge deep learning models to solve real-world problems. Proficient in Python, TensorFlow, Keras, and other deep learning frameworks. Strong analytical and problem-solving skills. Excellent communicator and team player with a strong desire to learn and contribute to the field of data science.Looking for a challenging role to apply my technical expertise and contribute to innovative projects in the field of data science.

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Education

2020-2023
Computer science degree
National Engineering School of Sfax (ENIS)
2018-2020
Mathematics Physics : Preparatory Cycles to Engineering Studies
Faculty of Sciences of Sfax (FSS)

Skills

- Deep Learning : Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Generative Adversarial Networks (GANs), Transfer Learning, Fine-tuning, Model Optimization.
- Big Data : Hadoop, Spark, NoSQL .
- Machine Learning : Supervised and Unsupervised Learning, Feature Engineering, Model Evaluation, Hyperparameter Tuning.
- MLOps : Deployment and management of machine learning models in production, model monitoring, CI/CD, containerization (Docker, Kubernetes), model serving frameworks (TensorFlow Serving, MLflow) , Kubeflow.
- Programming : Python, Java, C++, shell scripting , SQL , Matlab .
- Python Libraries and Frameworks : TensorFlow, Keras, PyTorch, scikit-learn, NumPy, Pandas, Matplotlib, OpenCV ,Matplotlib, Seaborn, Plotly.
- Tools : Jupyter Notebook, Git, Docker Github , Kubernetes , Airflow , MLflow , DVC , CML , Flask, Django .

Experience

01/2023–06/2023
Udini.ai l Tunisia

MLOps Engineer Intern - End of study project

- Implemented end-to-end deep learning workflows , including model development, deployment, monitoring, and management in production environments.
- Automated model deployment and serving using containerization technologies (Docker) and model serving frameworks (TensorFlow Serving, MLflow), resulting in improved model reliability and scalability.
- Benchmarked and adapted different MLOps workflows and tools to the company's process, evaluating their effectiveness and recommending best practices for model deployment.
- Prepared training datasets for Deep Learning models, ensuring high quality and accurate training data.
- Trained models using popular frameworks like mmDetection and YOLOv8, and NVIDIA TAO Toolkit, optimizing models using ONNX and TensorRT for improved performance.
- Deployed models on NVIDIA Triton, ensuring efficient and scalable model serving.
- Technologies : AWS , Yolov8 , NVIDIA TAO Toolkit , NVIDIA Triton , ONNX , MLflow , Git , github , Docker , DVC , CML , Airflow .

06/2022-09/2022
Iovision l Tunisia

Deep Learning Engineer Intern

- Developed a deep learning model using transformers (like : SOTR , ISTR , DETR) for image instance segmentation .
- Implemented YOLOv7 algorithm and compare the result with Transformers algorithms .
- Conducted data preprocessing, including data augmentation,to enhance the model's performance.
- Optimized model architecture and hyperparameters to improve accuracy and robustness.
- Conducted web scraping and data annotation to create a labeled dataset for training the model.
- **Technologies :** Yolov7 , Detectron2 ,SOTR , ISTR , DETR ,makesense.ai , PyTorch, scikit-learn, NumPy, Pandas, Matplotlib, OpenCV.

06/2021–09/2021
Université Paris-Est Créteil-Laboratoire Images, Signaux et Systèmes Intelligents | Paris, France

Deep Learning Engineer Intern

- Collected a dataset of 654 videos from YouTube for PTSD diagnosis research.
- Conducted data annotation to label the dataset for training deep learning models.
- Developed deep-learning-based approaches for PTSD diagnosis using CNNs and RNNs.
- Conducted model evaluation and optimization to improve accuracy and reliability.
- Collaborated with supervisor and research team to analyze results and draw conclusions.
- Authored a paper based on the research findings and submitted it to IEEE Affective Computing 2022.
- Published as an author in the IEEE Affective Computing 2022 conference proceedings.
- Paper link : PTSD in the Wild
- **Technologies :** LSTM , CNN , RNN , MTCNN , Keras , Tensorflow , Resnet50v2 .

Associative Life

Certificatins

- AI-900: Microsoft Certified: Azure AI Fundamentals
- Scrum Fundamentals Certified (SFC™)
- AWS Machine Learning Foundations - Certified 2022
- Machine Learning Engineering for Production (MLOps) Specialization-Coursera

Language

English

Arabic

Frensh

Academic Projects

Detection and tracking Multi speakers Video Conferencing with yolo 7 and blockchain :

- Developed and customized YOLOv7-based object detection and tracking system for multi-speaker video conferencing, utilizing TensorFlow Lite for mobile deployment.
- Developed mobile application using Android for deploy the model on it .
- **Technologies :** Yolov7 , Android studio , Tensorflow Lite , blockchain and firebase .

End of year project : Social User Profiling for Ads Recommendation using 24 Facebook classes with Arabic dataset :

- Built a website using ReactJs and Django for user interaction with the social user profiling system, allowing users to view and manage their profile settings and preferences.
- Developed a social user profiling system for ads recommendation using a deep learning model with CNNs and TunBert for Arabic dataset with 24 Facebook classes.
- Implemented text classification and sentiment analysis techniques for user profiling, incorporating natural language processing algorithms to capture user preferences and interests.
- Utilized Git for version control, Agile/Scrum methodology for project management, and deployed the machine learning model for production use.
- **Technologies :** ReactJs and Django and a deep learning model using CNN and TunBert.

Snake game with Reinforcement Learning :

- Developed a snake game with reinforcement learning and deep Q learning algorithms, resulting in an adaptive game-playing agent that learns and improves its performance over time.
- **Technologies :** Reinforcement Learning and Deep Q Learning .

"FruitScan": Fruit and vegetables detection :

- Developed a computer vision project called "FruitScan" that detects fruits and vegetables using CNNs, TensorFlow, Keras, and OpenCV, resulting in improved accuracy and efficiency in fruit sorting and classification.
- **Technologies :** CNN, TensorFlow, Keras, and OpenCV.

Personal Projects

End To End Machine Learning Project Implementation With Dockers,Github Actions And Deployment:

- Implementing an end to end ML project with Docker , Heroku And Github Actions
- **Technologies :** Git , Github , Docker , Heroku , flask .

Face mask detection :

- Real time face mask detection using Python, Keras, OpenCV and MobileNet
- **Technologies :** Python, Keras, OpenCV and MobileNet.

Enis-Chatbot :

- Create a chatbot for enis student that allow them to ask questions about ENIS and the chatbot answer them
- **Technologies :** Python, Pytorch , NLP , RNN.

Sign Language Detection :

- Sign Language Detection with Python and LSTM Deep Learning Model
- **Technologies :** Python, CNN , NLP , LSTM.