ISSAM JEBNOUNI

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SKILLS

Deep Learning, Image and video Processing, Computer Vision, Linux, Python, Flask, Streamlit, OpenCV, Tensorflow, Keras, Scikit-learn, Pandas, Numpy, Pillow, Nvidia TAO Toolkit, Ultralytics, Detectron2, MMDetection, Docker.

EDUCATION

NATIONAL INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY North Urban Center, Tunisia
Master of Science Sep 2019 – June 2024
Major in Computer Science; **Minor** in Image and Video Processing.
Relevant Coursework: Machine learning, Deep Learning, Image and Video Processing, Big Data, Business Intelligence, Linux.

WORK EXPERIENCE

AVIDEA North Urban Center, Tunisia
Computer Vision End-of-studies Intern Feb 2024 – May 2024
- Trained a car damage segmentation model to identify 6 damage types in insurance subscription images.
- Created and containerized an API, enabling deployment and integration by the web team on Avidea's demo page.
- Reduced the necessary time to process images by a factor of 3 and cut workforce requirements by 20%.

DATADOIT Manouba, Tunisia
Computer Vision Intern Jul 2023 – Aug 2023
- Developed a web application with Flask which scans multiple camera streams in the local network and displays them.
- Experimented with and benchmarked multiple object detection models in the Nvidia TAO Toolkit.
- Trained YOLOv8 model on the same task using a mixture of synthetic and real data and validated on real data only. Using this approach achieved 96% validation mAP50.

PROJECTS

YOLOv8 OBJECT DETECTION FOR FOOTBALL Self-initiated project
- Trained a YOLOv8 object detection model on a custom football dataset featuring four classes, achieving 86% mAP50 on the validation set after 25 epochs.

FACIAL VERIFICATION MODEL USING A SIAMESE NETWORK Self-initiated project
- Crafted a training dataset, incorporated data augmentation to expand it to 3000 images.
- Built a Siamese neural network, tailored for comparing similarities using Tensorflow's Functional API that yielded remarkable average recall and precision on the test set.

ARABIC WORD-LEVEL SIGN LANGUAGE RECOGNITION MODEL End of Year project
- Extracted Hand and Pose Keypoints from sign videos of 100 Arabic words using Mediapipe's Holistic Model.
- Trained a BiLSTM model on the extracted features and achieved 99% accuracy on test data.

ACHIEVEMENTS

- Achieved second place in a computer vision hackathon where we detected defects on tokens on a conveyor belt in real time.

EXTRACURRICULAR ACTIVITIES

IEEE INSAT STUDENT BRANCH Gammarth, Tunis
Head of Sponsorship of the IEEE R8 SYP Congress Feb 2022 – Aug 2022
- Organized the IEEE EMEA Region Student and Young Professional Congress in Tunisia that attracted 200 participants.
- Raised approximately 30,000$ from local and international sponsors to fund the congress.

IEEE COMPUTER SOCIETY CHAPTER INSAT North Urban Center, Tunis
Ambassador / Project manager of the fifteenth edition of the international hackathon IEEEXtreme Apr 2021 – Oct 2021
- Served as one of 700+ ambassadors around the world to communicate essential information to my student branch.
- Managed a committee to organize a highly successful edition of the hackathon, attracting 160 participants.