Malek Zitouni

+216 28 549 113 | malek.zitouni@insat.ucar.tn | https://www.linkedin.com/in/malek-zitouni-357109275/ |
https://github.com/malekzitouni

EXPERIENCE

3D computer Vision Intern   August 2024
BIM IN TOUCH filiale du Poulina Group Holding   *Tunis*
- Conducted in-depth research on Scan to BIM, Scan vs BIM, and Automated Construction Modeling
- Implemented deep learning models: PointNet++ and RandLA-Net for semantic segmentation of large-scale point clouds on google cloud

Industrial Intern   July 2024
SICAM Industry   *Beja,Tunis*
- Gained foundational knowledge of key industrial processes and workflow management in a manufacturing environment, including an overview of product lifecycle stages from raw material handling to final quality checks.
- Worked alongside experienced engineers and technicians, gaining firsthand exposure to systematic troubleshooting and root-cause analysis methods

PROJECTS

Exploring Attention Mechanisms in Object Detection & Region-Specific Classification   October 2024
- Developed an object detection model using ResNet-50 with attention mechanisms and Region of Interest (ROI) masks to enhance small object detection and improve classification of blurred images.

Flower Classification Using ResNet-50 and Transfer Learning   September 2024
- Developed a flower classification model using the ResNet-50 architecture and transfer learning, achieving 96.73% accuracy in classifying five flower species.
- Leveraged Google Cloud's Vertex AI Workbench for scalable model training and deployment, optimizing the workflow in a cloud environment.

Visual Servoing of a Line-Following Robot   June 2024
- Built a lane detection system using a Raspberry Pi Camera and OpenCV for real-time road image processing.

EDUCATION

National Institute of Applied Sciences and Technology (INSAT)   Tunis, Tunisia
Engineering Student: Industrial and Automatic Computing   *2024 – Present*
- Computer Science: Object Oriented Programming (JAVA), Operating Systems, Databases (SQL), Microprocessors

National Institute of Applied Sciences and Technology (INSAT)   Tunis, Tunisia
Integrated Preparatory Cycle for Engineering Studies   *2021 – 2023*
- Focused on Maths, Physics and Algorithms

High school School   Tunisia
Baccalaureate Degree (Graduated with Highest Honors, 18.16/20)   *2021*

EXTRACURRICULAR ACTIVITIES

DataOverflow INSAT Club : Human Resources Manager   2023 – 2024
Led recruitment and management of over 50 members, ensuring smooth club operations.

AEROBOTIX INSAT Club : Member   2021 – 2024
Contributed to the design and development of autonomous robots in national competitions.

Tunisian Collegiate Programming Contest (TCPC) : Volunteer Staff   2021 – 2022
Assisted in event logistics and provided support to over 100 contestants.

CERTIFICATIONS

Deep Neural Networks with PyTorch

LANGUAGES

English - French -Arabic