Hatem Trigui

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EDUCATION

NATIONAL ENGINEERING SCHOOL OF TUNIS
M.Sc in Information Processing and Complexity of Living Systems
Sep 2024 - Present | Tunis, Tunisia
Telecommunications Engineering with minors in Data Science and AI
Sep 2022 - Present | Tunis, Tunisia

PREPARATORY INSTITUTE FOR ENGINEERING STUDIES OF EL-MANAR
Pre-engineering studies in Mathematics and physics
Sep 2020 - Jun 2022 | Tunis, Tunisia

HARD SKILLS

PROGRAMMING LANGUAGES
Python • C/C++ • Java • Matlab • TypeScript

WEB DEVELOPMENT
HTML/CSS • JavaScript • React
Django • Nest • Node.js

DATA ANALYSIS AND MACHINE LEARNING
Pandas • NumPy • Matplotlib • Seaborn
Scikit-learn • TensorFlow • PyTorch • Keras

VERSION CONTROL AND DATABASE MANAGEMENT
Git/Github • Gitlab CI/CD • SourceTree
MySQL • MongoDB

SOFT SKILLS

Flexibility • Project Management • Teamwork
Problem solving • Continuous Learning

LANGUAGES

•**Arabic:** Native •**French:** Fluent
•**English:** Fluent •**German:** Basic Knowledge

ASSOCIATIVE LIFE

IEEE ENIT SB : Institute of Electrical and Electronics Engineers.
AIESEC in Tunisia - Manar
Rotaract Club Mahdia, Tunisia

LINKS

Github:// **hatrigui**
LinkedIn:// **Hatem Trigui**

PROFESSIONAL EXPERIENCE

PLUG&TEL | Software Engineering Intern
Jun 2024 – Aug 2024 | Tunis, Tunisia
- Designed and implemented microservices using NestJS, TypeScript, and MongoDB to enhance application scalability and performance.
- Developed and integrated new functionalities using queue systems, improving overall workflow automation and data processing.
- Built a robust logging system with Winston, significantly improving system monitoring and error tracing.
- Set up and maintained a monitoring system using the ELK Stack providing log analysis, and system health tracking.
- Collaborated during 4 sprints in an Agile/Scrum environment, handling task management via Jira and documenting technical details on Confluence.

IEEE ENIT SB | IEEE TSYP 11 SMC&EdSoc Technical Challenge Lead
Oct 2023 – Dec 2023 | Tunis, Tunisia
- Conducted a comprehensive survey to evaluate student well-being.
- Analyzed the collected data to capture key stressors in tunisian universities using NLP.
- Developed a user-friendly ReactJS application to provide insights into student well-being.
- Led the team to secure the first prize among 16 competing teams from various engineering schools in Tunisia.

PRIMATEC ENGINEERING | Summer Intern
Jun 2023 – Jul 2023 | Sfax, Tunisia
- Supported the implementation of non-implemented features based on the ASAM Standard within odxtools, an open-source project on GitHub maintained by Mercedes-Benz Group.
- Gained hands-on experience in automotive engineering and ECU technologies.

ACADEMIC PROJECTS

END OF YEAR PROJECT II | Implementation of a Batch Image Processing Tool for Cardiac MRI Images
Nov 2023 – May 2024 | Tunis, Tunisia
- Implemented advanced image segmentation techniques using Deep Learning, including YOLOv8 and U-Net models, for precise analysis of aortic structures.
- Developed "Aorte+," a Django-based web app for aortic image segmentation from cardiac MRI data,

END OF YEAR PROJECT I | U-Net and its variants for medical image segmentation.
Dec 2022 – Apr 2023 | Tunis, Tunisia
- Developed expertise in deep learning techniques, particularly in the domain of medical image segmentation.
- Addressed U-Net's limitations by proposing variants like U-Net++, V-Net, and U-Net 3D, significantly enhancing its performance in specific medical image segmentation scenarios.