WELID BEN YAHMED

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SUMMARY — A fresh dual-degree graduate with an international study/work experience, multilingual fluency, and a strong passion for data and machine learning.

PROFESSIONAL EXPERIENCE

STMicroelectronics   **Milan, Italy**
Data Science Intern   *July 2023 – August 2024*

- Leveraged machine learning models on MEMS pressure sensors to predict the error in measurements introduced by thermal stresses to ultimately infer accurate vertical position; published article in MDPI journal.
- Recovered over 70% of the pressure sensor's accuracy after thermal stress by developing deeply quantized models with optimized performance for deployment on embedded devices with constraints on inference time and memory.
- Delivered a presentation at an international conference on upgrading Time-of-Flight sensor with quantized models for ultra-low resolution image classification; proceedings of Applepies 2023 conference.
- Enabled the deployment of Generative AI on edge running a Tiny LLM (Llama2 of 15M parameters in fp32 pretrained in PyTorch) for efficient local inference in C on 64-bit microprocessor (STM32MP2).

EDUCATION

University of Trento   **Trento, Italy**
Master of Science in Information and Communication Engineering (taught in English)   *January 2022 – March 2024*

- Graduated with a double degree from the University of Trento and the Higher School of Communication of Tunis (SUP'COM). Courses: Deep Learning, Statistics, Signal Processing, Computer Vision.

Higher School of Communication of Tunis (SUP'COM)   **Tunis, Tunisia**
National Engineering Degree in Telecommunications and Computer Science   *September 2019 – July 2021*

- Ranked among the 10% first candidates in the Tunisian national examination for entrance to engineering schools "classe préparatoire scientifique" and selected for a double degree program at the University of Trento. Courses: Linear Algebra, Calculus, Programming, Networks, Machine Learning, Cloud infrastructures, Databases.

PROJECTS

- **Deep learning for unsupervised image classification:** Achieved a 6% boost in image classification accuracy by integrating an unsupervised domain adaptation module into a deep neural network, substantially minimizing the reliance on image data labeling.
- **Prediciton on time series data:** Index price prediction comparing ARIMA models with LSTM-based deep learning approaches. Applying econometric models and CAPM for portfolio risk management and economic recession forecasting based on financial time series data.

SKILLS AND CERTIFICATES

Spoken Languages	English(C1), Arabic(Native), French(Bilingual), Italian(C1), Spanish(B1).	**IBM Data Science**	Professional certificates: Machine Learning, Data Visualization, Data Analysis, Databases.
Soft skills	Communication and presentation, Cross-cultural adaptability, Autonomy and initiative, Attention to detail, Problem-solving, Structured thinking, Lifelong learning.	**Frameworks**	Python (TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, Numpy, Matplotlib), Matlab, C/C++, SQL, PowerBI.

HOBBIES AND INTERESTS

- Taekwondo player (former) and bronze medal winner in the Tunisian national competition of 2008.
- Tennis enthusiast and former player at Tennis Club of Tunis.
- Outdoor activities enthusiast (camping, hiking, cycling, etc.)
- Engaging in environmental campaigns with Tounes Clean-Up NGO, promoting reforestation, cleaning initiatives, and raising public awareness about nature conservation in Tunisia.