

Lorenzo Palloni - Résumé

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Education

- *Master's degree, Computer Science, 110/110*
 - University of Florence (Oct 2018 - Apr 2023)
 - Thesis: **Optimization Techniques of Deep Learning Models for Visual Quality Improvement**
 - *Bachelor's degree, Statistics, 107/110*
 - University of Florence (Sep 2015 - Oct 2018)
 - Thesis: **A new Python package for Feedforward Neural Networks**
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Work Experience

- *R&D Embedded Software Engineer at Henesis, Jul 2023 - Present*
 - Developing and maintaining firmware for a custom PCB with the nRF52840 SoC designed for Brain-Computer Interface (BCI) applications, utilizing C and the Zephyr RTOS.
 - Optimized BLE data streaming at 125Hz from various sensors (ADC, IMU, PPG, Fuel Gauge), taking care that each sensor operates at its designated frequency.
 - Ensured accurate EEG signal acquisition, leveraging a high-quality signal generator.
 - Demonstrated proficiency in debugging, using oscilloscopes, logic analysers, power profiling tools (such as the Nordic Semiconductor PPK2) and soldering for essential hardware tweaks.
 - *R&D Machine Learning Engineer at Henesis, Jul 2022 - Jun 2023 (1 year and 1 month)*
 - Contributed to a Computer Vision research project for real-time Instance Segmentation.
 - Followed a comprehensive work cycle that included conducting literature reviews, selecting state-of-the-art techniques, implementing the chosen approaches within the company's Machine Learning infrastructure, and training and validating the models using mainly PyTorch.
 - *Data Scientist at Swiss Reinsurance Company Ltd., Apr 2020 - Sep 2021 (1 year and 6 months)*
 - Developed the Swiss Re ADAS risk score, which assessed the relationship between a client's car safety systems (ADAS) and the standard objectives of an insurance company (i.e., claim frequency, severity, and paid losses).
 - The primary models considered during the analysis were GLMs (Generalized Linear Models) with Neural Networks used as feature-extractors, and GBDT (Gradient Boosting Decision Trees) using mainly Python.
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Interests

My passion lies in bridging the gap between Embedded Systems and Machine Learning, a field known as TinyML. I am driven by the desire to implement innovative solutions, contribute to open-source projects, and collaborate in multicultural environments to develop products that positively impact the world.

Outside the canonical work hours, you can find me skating around on my mini-cruiser, or reading a non-fiction book about personal development or psychology. I value socializing, especially on weekends, and I'm committed to self-improvement and positively influencing others, always aiming for win-win situations in my interactions.
