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

Work Experience

- **R&D Embedded Firmware 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 of 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.

Interests

My passion lies in developing real-world Embedded Systems applications, optimizing for the stringent constraints of memory, speed, and power in tiny devices. As a cherry on the cake, I would love to leverage my experience in Machine Learning to make a system smarter using tools from the TinyML field. 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.