COMPUTER SCIENCE MSc. STUDENT

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## About Me\_

I'm a graduate student in Computer Science and Engineering currently pursuing my master degree in Artificial Intelligence at Politecnico di Milano. Throughout my academic career, I had the opportunity to develop a strong analytical thinking and flexible problem-solving skills, by taking part to several projects which enriched my technical skill set and team management capabilities.

## Why Me? \_\_\_\_

I'm always ready for new challenges, involving both known and unknown to me technologies, where my adaptability can come into action. I always catch the opportunity to put both my coding and research knowledge to work, through personal and team projects. My past achievements demonstrate my ability to hit deadlines, maintain strong attention to detail, and produce quality code.

Among my previous team works notable cases are the implementation of a board game in Java, providing 3D graphics and an enjoyable multiplayer experience, the Python development of an Online Learning framework exploiting Multi Armed Bandits for conducting effective advertising campaigns and the acceleration of the Top-K Personalized Pagerank algorithm on GPU using CUDA, exploiting heuristics that allowed up to 547x speedup with respect to a single-threaded CPU.

My research experience recently started through the NECST-Camp at Politecnico di Milano. Currently I'm focusing on Semantic Segmentation of medical images employing Deep Learning models. Previously I developed DicomViz, a modular, expandable and lightweight portable DICOM viewer application fully capable of loading and displaying various imaging technologies, providing usage capabilities aligned with consolidated standards. Its building blocks are popular and updated technologies, paired together to provide high modularity and expandability.

My current research project consists in the development of an automatic tool for mammography segmentation and classification, employing cutting edge technologies. The framework works as follows: as a first step an improved U-Net network accomplishes the segmentation task, then a statistical classifier, trained with radiomic features extracted from segmented masks, is employed to perform logistic regression for predicting if a segmented mass is benign or malignant.

Successfully work as a team, complete tasks independently and spare among different topics have been fully proven by my past experiences.

## Interests & Ambitions

My future research goals both in academia and companies are oriented towards deepening the understanding of the capabilities of deep learning techniques for imaging applications. Furthermore I would like to strengthen my knowledge and research experience on fields related to online machine learning, data analysis and graph analytics. Finally, my scope of interests also include job positions through which I can have technical and business oriented experiences.

## Pablo Giaccaglia