ENRICO SARNERI

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EDUCATION

Polytechnic University of Milan, Italy September 2020 - October 2023
Master's Degree in Computer Science and Engineering. GPA: 3.75/4

· Relevant Courses: Artificial Neural Networks and Deep Learning, Computer Graphics, Model Identification and Data Analysis 1 & 2, Design and Implementation of Mobile Application, Advanced User Interfaces.

Sorbonne University, France September 2021 - July 2022
Erasmus+ Exchange, M2 in Computer Science and Engineering

· Relevant Courses: Image Analysis and Computer Vision, Machine Learning, Multidisciplinary Project.

Alma Mater Studiorum - University of Bologna, Italy September 2017 - October 2020
Bachelor's Degree in Computer Science and Engineering. GPA: 3.75/4

· The program aims at providing students with a solid scientific education thanks to several courses focused on mathematics, physics, and electronics together with computer science engineering skills in the fields of programming languages, operating systems, databases, automation, and web technologies among others.

Liceo Scientifico Torricelli-Ballardini of Faenza, Italy September 2012 - June 2017
Scientific High School

CARRIER OBJECTIVE

I am fascinated by Artificial Intelligence and its interconnected subfields like Computer Vision, Machine Learning, and Deep Learning. In particular, I am strongly interested in their applications to the healthcare system and I would like to reinforce my skills with both a deep understanding of theoretical insights and state-of-the-art technologies. Given the current revolution in data and the significant advances in computational capabilities, it is only through one's creativity that the next phase of this technological era can be shaped. I am eager to be a participant in this exciting time.

WORK EXPERIENCE

Institut Curie, France February 2022 - July 2022
Research Internship for Master Thesis

· Evaluation of Geometrical Accuracy in Single Isocenter Multi-Target Cranial Stereotactic Radiotherapy and Stereotactic Radiosurgery. The project aims to realize a software able to automate the process of spherical balls and Multi-Leaf Collimator identification in 2D Portal Images and measure the geometrical displacements of the latter with respect to their theoretical position inside Digital Reconstructed Radiographs, in a 3D setting.

Freelance 2015 - Present
Disc Jockey

· Independent Disc Jockey for parties and events. Development and enhancement of time, resource and workload management skills, as well as public relations and resourcefulness.

PROJECTS

Artificial Neural Networks and Deep Learning: ***Image Classification and Time Series Classification***
The project is divided into two parts. The first one consists in developing an image classification model for a plant dataset, while the second one consists in creating a time-series classification model. Both projects have been realized by a 3-person team for the "Artificial Neural Network and Deep Learning" course, using Python and Tensorflow.

Multidisciplinary Project: ***Digital Pathology Approaches in Melanoma Care***
The first part of the project aims at realizing a Bibliographic Review of the role of Explainable Artificial Intelligence in Digital Pathology. The second part consists in using Image Processing techniques with the purpose of removing inks from Whole Slide Images. The project has been realized by a 1-person team for the "Multidisciplinary Project" course, using Qu-Path and Python .

Computer Graphics: ***Missile Simulator***
The project aims at designing a simulator of a point-to-point missile in a 3D landscape. The missile follows a parabolic-like trajectory and its orientation is interpolated accordingly. The project has been developed by a 1-person team for the "Computer Graphics" course, using Vulkan and C++.

Design and Implementation of Mobile Applications: ***Book a Place***
The project aims at designing a mobile application (iOS and Android) that can manage events. In particular, it offers different account types and allows the creation of events as well as the reservation of places, interacting with a Google Map. Also, a Qr Code system has been implemented in order to check and verify reservations. The project has been developed by a 2-person team for the "Design and Implementation of Mobile Application" course, using Flutter and Android Studio.

Advanced User Interfaces: ***Hololimb***
The project aims at realizing a virtual arm with the purpose of mitigating or eliminating the pain and discomfort caused by Phantom Limb Sensations. The application is distributed through a Mixed Reality solution and developed for Microsoft HoloLens 2. The project has been realized by a 2-person team for the "Advanced User Interfaces" course, using Unity and C#.

Formal Methods For Concurrent and Real-Time Systems: ***Stochastic Model Checking of Warehouse Robotic System***
The project aims at realizing the model and the real-time verification of a system constituting a robot moving inside a warehouse delivering and taking parcels. The project has been developed by a 3-person team for the "Formal Methods for Concurrent and Real-Time Systems" course, using UPPAAL.

Software Engineering: ***Cluedo***
The project aims at implementing a digital version of the famous table game of the same name. This project has been carried out by a 3-person team for the "Software Engineering" course and realized with Java technologies.

TECHNICAL STRENGTHS

Programming and Markup Languages: Python, C, C++, C#, Java, Assembly, JavaScript, Dart, Matlab, HTML, CSS, LaTeX.
Libraries & Frameworks: OpenCV, Tensorflow, Keras, Scikit-learn, NumPy, SciPy, Pandas, Matplotlib, Pydicom, SimpleITK, Flutter.
Software & Tools: Visual Studio Code, Jupyter, MS Office 365, Unity, 3DSlicer, GitHub, Eclipse, MySQL, Vulkan, Bash.

LANGUAGES

Italian - Native or bilingual proficiency: ● ● ● ● ●

English - Professional proficiency: ● ● ● ● ○

French - Elementary proficiency: ● ◐ ○ ○ ○

EXTRA-CURRICULAR

9-year football formation during Middle and High School.

4-year music school formation, guitar and solfège courses during High School.

Dual system of vocational training during High School.

Two weeks English Language Course at Studio Cambridge - Lucy Cavendish College, Cambridge, United Kingdom. Summer 2016.

HOBBIES

Playing and producing music.

Watching TV Series and stand-up comedy.

Analyzing football.

Travelling abroad and discovering new cultures.