

MONTEIRO DEL PRETE

[Email](#) [LinkedIn](#) [GitHub](#) [Website](#)

PROFESSIONAL EXPERIENCE

Teoresi Group, Italy (NA)

03/2023 – Present

AI Software Engineer

- Designed and developed a web scraper for analysis tool for Standard Development Organizations (i.e. ETSI, 3GPP, MPEG). Integrated LLM for topic extraction and automated magazine summarization for newsletter generation.
- Designed and developed a desktop application for system diagnostics with real-time updates achieving sub-second response time (µs) for processing 500 samples.
- Enhanced communication security of open-source video conference service Jitsi Meet through the integration of Quantum Key Distribution.
- Designed and developed an HMI application for pallet management, implementing a custom recursive algorithm for the pallet loading problem, which resulted in a 20% increase in productivity of pharmaceutical robots.
- Reduced traffic congestion by designing and developing a communication network for cloud-based video processing for road sign detection and recognition.

TECHNICAL SKILLS

Programming Languages: C++, C, Python

Databases: PostgreSQL, SQL Server

Frameworks: Qt 6.5 LTS, Tensorflow, Keras, LangChain

Cloud Platforms: Azure, AWS

DevOps Technologies: Docker, Git, CMake

Operating Systems: Linux-based, Ubuntu

Data Structures and Algorithms

Software Engineering principles, Design Patterns, Clean Code

EDUCATION

University of Naples "Federico II"

12/2020 – 07/2023

Master of Science in Artificial Intelligence 110/110 with highest honors

Naples, Italy

University of Naples "Federico II"

09/2017 – 12/2020

Bachelor's Degree in Computer Science 110/110

Naples, Italy

PROJECTS

Proximal Humerus Fractures (PHFs) Recognition *Python, Tensorflow*

03/2023

- Developed a deep learning model for PHFs recognition (i.e. segmentation and labeling).
- Decreased the energy consumption for training by implementing hybrid (2D/3D) deep learning model.
- Implemented the Triplanar U-Net (Sundaresana et al.)

Real-time Hand Gesture Recognition *Python, Tensorflow*

01/2023

- Developed a real-time system for hand gesture recognition.
- Integrated MediaPipe to work with hand skeleton model.
- Implemented homographic transformation and Hough circle detection for heuristic classification.

Self-Driving Car with Reinforcement Learning *C#, Unity*

09/2022

- Self-Driving Car with Deep Reinforcement Learning algorithms in Unity-MLAgents environment.
- Compared two Deep Reinforcement Learning algorithms: PPO and SAC.

Convolutional Neural Network from scratch *Python*

07/2022

- Implemented from scratch feed-forward layers, convolutional layers and learning with backpropagation for hand digits recognition.

CERTIFICATIONS

British Council IELTS

01/07/2022

English Student - 7.0/9.0 Score

Naples, Italy (IT)

Kaplan International Languages

06/08/2018 – 24/08/2018

English Student - B2 Level

Santa Barbara, California (US)