Monteiro Del Prete

Email LinkedIn GitHub Website

WORK EXPERIENCE

Software Engineer @ Teoresi Group **03/2023 – present**
C++, Python, Qt, Azure *Naples, Italy*

- Developed desktop application for data diagnosis with real-time system update <1s for 500 samples.
- Increased the communication security of Jitsi Meet by 5% by implementing Quantum Key Distribution.
- Increased productivity of pharma robots by 20% by implementing ad-hoc recursive algorithm for the Pallet Loading Problem.
- Designed and implemented a web scraper with emphasis on network latency and optimization of temporal and spatial complexity obtaining a 85% reduction in user analysis time.

Software Engineer @ Teoresi Group **09/2020 – 11/2020**
Python, AWS *Naples, Italy*

- Reduced traffic congestions by designing and developing a communication network for cloud-based video processing for road signs detection and recognition.
- Integrated Haar Cascade Classifier in AWS Lambda for cloud processing.
- Integrated AWS S3 for storage and AWS Iot Core for communication.

TECHNICAL SKILLS

Programming Languages C++, Python
Databases Postgresql, SQL Server
Frameworks Qt 6.5 LTS, Tensorflow, Keras
Devops Technologies Docker, Git, CMake
Operating Systems Linux based, Ubuntu
Data Structures and Algorithms
Software Engineering principles, Design Patterns, Clean Code
Deep Learning and Machine Learning with interest in Computer Vision (CNN) and Reinforcement Learning

EDUCATION

University of Naples "Federico II" **12/2020 – 07/2023**
Master of Science in Artificial Intelligence 110/110 cum Laude *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).
- Increased 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)*