Monteiro Del Prete

Email: monteirodelprete@gmail.com LinkedIn: linkedin.com/in/monteirodelprete
GitHub: github.com/monidp9 Website: monteirodelprete.com

PROFESSIONAL EXPERIENCE

Teoresi Group, Italy **03/2023 – Present**
Software Engineer

- Designed and developed web scraper for analyzing technical standards from SDOs (ETSI, 3GPP, MPEG). Integrated language models for automated topic extraction and content summarization
- Developed a desktop application for electrical regulator diagnostics in pharmaceutical packaging machinery with real-time monitoring capabilities. Achieved sub-second response time (less than 1 second) for processing and analyzing 500 sensor samples, enabling immediate fault detection
- Enhanced communication security of open-source video conferencing platform Jitsi Meet through integration of Quantum Key Distribution protocols
- Designed and developed an HMI application for pallet management, implementing a custom recursive algorithm for the 2D pallet loading problem. Achieved a 20% increase in production throughput
- Designed communication architecture for cloud-based video processing system for traffic analysis and road sign detection

TECHNICAL SKILLS

Core Competencies: Algorithm Design & Computational Efficiency, Systems Architecture
Programming Languages: Python, C, C++
Cloud & Databases:PostgreSQL, SQL Server, Azure, AWS
Frameworks: Qt 6.5 LTS, TensorFlow, Keras, LangChain
Systems & Tools: Docker, Git, CMake, Linux/Ubuntu
Emerging Interests: Computer Vision, Reinforcement Learning, Deep Learning, Software Performance Optimization

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 Fracture (PHF) Recognition *Python, Tensorflow* **03/2023**

- Developed hybrid 2D/3D deep learning model for PHF segmentation achieving 85% IoU on clinical dataset
- Reduced training energy consumption by 40% through novel hybrid architecture
- Implemented Triplanar U-Net architecture

Real-time Hand Gesture Recognition *Python, Tensorflow* **01/2023**

- Built real-time gesture recognition system achieving 30 FPS inference speed with 92% accuracy
- Applied homographic transformation and Hough circle detection for heuristic classification

Self-Driving Car with Reinforcement Learning *C#, Unity* **09/2022**

- Trained autonomous vehicle agents using PPO and SAC algorithms in Unity simulation environment with custom reward shaping
- Achieved 89% track completion rate with PPO vs 76% with SAC, analyzing sample efficiency and convergence behavior

Convolutional Neural Network from scratch *Python* **07/2022**

- Implemented complete CNN framework including forward/backward propagation, convolutional layers, and gradient descent without ML libraries

CERTIFICATIONS

British Council IELTS **07/2022**
English Student - 7.0/9.0 Score *Naples, Italy (IT)*

Kaplan International Languages **08/2018**
English Student - B2 Level *Santa Barbara, California (US)*