Pierluigi Cosi

Nationality: Italian

CONTACT

WORK EXPERIENCE

16/09/2024 – CURRENT Lecce, Italy

Junior Research Associate CMCC Foundation (Euro-Mediterranean Center on Climate Change)

As Junior Research Associate within the Advanced Scientific Computing (ASC) division, i work on implementation and optimization of foundation model for ocean based on graph neural networks, as well as performance evaluation of parallel GPU models on High Performance Computing systems (Juno and Leonardo).

11/2023 – 04/2024 Lecce, Italy

Internship CMCC Foundation (Euro-Mediterranean Center on Climate Change)

The internship was carried out at the Advanced Scientific Computing (ASC) Division with the aim of developing a model based on graph neural networks for forecasting in the Mediterranean sea. I have gained experience with the use of scientific libraries aimed at handling formats such as NetCDF or Zarr, and with job scheduler on supercomputer facilities.

EDUCATION AND TRAINING

2021 – 2024 Lecce, Italy

Master Degree in Computer Engineering Università del Salento

Field of study Artificial Intelligence | **Thesis** Development of a Graph Neural Network for ocean modeling applied to the Mediterranean basin

2018 – 2021 Lecce, Italy

Laurea triennale in Ingegneria dell'Informazione Università del Salento

Thesis Hardware and firmware development of a smart home remotely controlled by a mobile application based on MQTT

2013 – 2018

Maturità scientifica Liceo Scientifico Statale Giulietta Banzi Bazoli

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening B2		**Spoken production** B2
Reading B2		**Spoken interaction** B2
Writing B2		

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Excellent knowledge of Python language │ML frameworks: JAX, PyTorch, Tensorflow │Python Scientific Libraries (Numpy, SciPy) │Data formats (NetCDF, Zarr) │Parallel job scheduling on HPC environments as Juno and Leonardo │Operating System: Linux │Database management systems (MySQL, MongoDB) │Good knowledge of C and Javascript languages │IoT applications

PROJECTS

FWI prediction

The project aims to predict the Fire weather index in Lecce, comparing different multiclass classification and regression models, as well as neural networks.

Wildfires detection

Purpose of the project is to train and evaluate the YOLOv5 network with a specific dataset, in order to recognise wildfires in images and videos.

PCY algorithm

Implementation of the PCY (Park-Chen-Yu) algorithm for efficient mining of frequent itemsets.

RTLS in a BIM

The work performed allows obtaining and managing data from an indoor real time locating system, integrating an intermediate layer for streaming and saving purposes. It gives also the end user the ability to view such data in a WebApp created through a Building Information Modelling System.

COMMUNICATION AND INTERPERSONAL SKILLS

Teamwork skills

Teamwork experience gained at university projects and internship, presenting projects during online and in-person english-language meetings. Good ability to adapt to new contexts.