CURRICULUM VITAE

Personal Information

Name	Davide Fuligno
Nationality	Italian
Date of Birth	19 november 2001
Position	MSc Student @ University of Trieste ⁞ ALICE junior member
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Education

MSc in Nuclear and Subnuclear Physics *October 2023 - present*
Physics Department, University of Trieste, Italy
Thesis theme: *Fast Calorimeter Simulation with ML techniques for the ALICE experiment*
Supervisor: Prof. Valentina Zaccolo, University of Trieste, INFN Trieste, CERN Switzerland

Extra educational activity during the MSc: Course "Introduction to Parallelism" held by Dr. Luca Tornatore, INAF, about Single core optimization, OpenMP and MPI, in C/C++.

BSc in Physics *October 2020 - October 2023*
Physics Department, University of Trieste, Italy
Thesis: *Study and Implementation of the Trigger for the Phi Meson with the ALICE Experiment*
Supervisor: Prof. Valentina Zaccolo, University of Trieste, INFN Trieste, CERN Switzerland
Co-supervisor: Dr. Chiara De Martin, University of Trieste, INFN Trieste, CERN Switzerland
Final Grade: 98/110

Academic Projects

MSc Traineeship *December 2024 - February 2025*
INFN, National Institute of Nuclear Physics, Local section of Trieste
Description: Machine Learning and Deep Learning techniques and Advanced Computing applied to high-energy experimental physics, using the Python programming language and state-of-the-art tools, with the ALICE collaboration. The ML techniques explored during the internship include Boosted Decision Trees (BDT), Neural Networks (NN), and various Generative Neural Network models (WGAN, Normalizing Flow, Diffusion Network).
Supervisor: Dr. Stefano Piano, INFN Trieste, CERN, Switzerland
Co-supervisor: Dr. Fabio Catalano, CERN Switzerland

Professional Experience

Teaching Tutoring in Newtonian Physics *September 2024 - December 2024*
Physics Department, University of Trieste, Italy
Support for the teaching of the Newtonian Physics course, including theoretical explanations and exercises for a group of 20 students.

Scholarship

Merit Scholarship, Luciano Fonda University College
October 2023 - present
Scholarship reserved for students enrolled in the Nuclear and Sub-Nuclear Physics specialization. Admission to and continued eligibility for the scholarship are subject to merit-based requirements.

Representative Student Experience @ University of Trieste

- Student Representative for the Department of Physics
  May 2023 - present

- Member of the Joint Teaching-Student Committee
  July 2024 - present
- Student Representative on the Board of the Department of Physics
  October 2023 - present
- Board of Trustees Member
  November 2021 - October 2023
- Member of the University Teaching Committee
  December 2021 - October 2023
- Member of the Student Council
  May 2021 - October 2023
- Student Representative for the Department of Physics
  May 2021 - November 2021
- Bachelor's Degree Course Representative for Physics
  November 2020 - October 2021

The University of Trieste has issued a badge in my name to certify the skills and knowledge I have acquired through my role as a student representative.

Skills

Programming Languages: Python, C/C++, ROOT, LabVIEW
Tools: OpenMP, MPI, Geant4, Pythia8.3, matplotlib, pandas, numpy, hipe4ML, xgboost, scikit, pyTorch
Languages: Italian (native), English (fluent), French (basic)