Daniel Díaz Quílez

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Publications

Abductive Explanations for Groups of Similar Samples — September, 2025
Submitted to ICLR

Paper on formal explainability of neural networks using SAT solvers.

Using Operative Reports to Predict Heart Transplantation Survival — September, 2022
IEEE: Engineering in Medicine & Biology

Paper on Natural Language Processing using PyTorch and Transformers.

Education

MSc in Mathematics and Statistics — September, 2024 – Present
University of Helsinki, Finland

- Specializing in Mathematical Logic.
- Thesis: Model Theory, Hrushovski Constructions, and Incidence Geometry.
- Belief Updates through Dynamic Modal Logic

MSc in Machine Learning, Systems, and Control — August, 2021 – June, 2022
Lund University, Sweden

Exchange program during the final year of my Bachelor's degree.

- Brain-Computer Interface for the Muse-S Headband

BSc in Mathematics and Computer Science — September, 2018 - June, 2022
Universidad Politécnica de Madrid, Spain

Honors in Discrete Mathematics.

- Thesis: Projective and Plane Curves - A relation between algebra, geometry, and topology.
- Competitive Programming: 1st place from my university in the AdaByron competition.
- Chess Engine: Ranked #382 (40/15 CCRL) with 2204 ELO.

Professional Experience

Teacher Assistant — January, 2025 – Present
University of Helsinki, Finland

- Basics of Mathematics in Machine Learning I & II
- Computer & Internet

Research Assistant in Logic and Machine Learning — May, 2025 – September, 2025
Aalto University, Finland

Researching formal explainability of neural networks.

Lead Machine Learning Engineer — May, 2025 – August, 2025
Trado Capital, Finland

Developing a model to identify real estate investment opportunities in Finland.

Robotics Software Engineer — August, 2023 - August, 2024
eProsima, Spain

Full-time developer in an 8-member Scrum team.

- Fast-DDS (ROS 2's middleware)
- SustainML (European Union Project)

Teacher Assistant — November, 2021 – June, 2022
Lund University, Sweden

- Computational Programming with Python

Languages

- C2 Spanish
- C2 English
- B1 French

Programming

- Python
- C++
- Java
- JavaScript

Skills

- Git
- Latex
- GNU / Linux
- HPC / SLURM