

Eric Roy-Almonacid

Teacher and full-stack dev
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I am currently finishing my masters thesis on game theory for optimization techniques for games with ordered preferences. I concurrently work at ASDT as a developer and researcher, while also teaching some undergraduate courses at Universitat Politècnica de Catalunya (UPC).

EDUCATION

- 2024–26 MSc in Machine Learning & Cybersecurity, Universitat Politècnica de Catalunya (UPC)
2020–24 BSc in ICT Systems Engineering, Universitat Politècnica de Catalunya (UPC)

EXPERIENCE

- 2026– ASDT Corporation S.L.u.
Researcher & DevOps Lead
ASDT handles Unmanned Aerial Vehicle (UAV) detection and inhibition for critical systems. I am responsible for scaling the infrastructure to new business demands while adding new features such as a CI&CD pipeline and gradual upgrades. I also participate in R+D projects that ensure our systems support state-of-the-art UAV protocols and devices.
- 2024– Universitat Politècnica de Catalunya (UPC)
Teacher
Taught courses on programmable devices (assembler) and applications and services on the internet to BSc students.
- Codelearn S.L.
- 2021–26 Full-stack developer
Maintained and enhanced a gamified web platform where kids can learn coding and computational thinking skills. One of the key tasks consisted of integrating external games or platforms (both physical and online) to their infrastructure.
- 2020–21 Programming teacher
Introduced kids into computational thinking. This includes programming, robotics, electronics and video games, using both educative and state-of-the-art tools.

INVITED TALKS

- 2025 Optimization of games of ordered preference – Iowa State University
Games of ordered preference for mobility systems – Interaction-driven Behavior Prediction and Planning for Autonomous Vehicles Workshop (ITSC 2025)

PUBLICATIONS

Asterisk (*) denotes equal contribution.

- 2025 P. de las Heras Molins*, E. Roy-Almonacid*, D. H. Lee, L. Peters, D. Fridovich-Keil, G. Bakirtzis
“Approximate solutions to games of ordered preference,” IEEE International Conference on Intelligent Transportation Systems (ITSC 2025)

OPEN SOURCE CONTRIBUTIONS

Skulpt, a Javascript implementation of the Python programming language. I improved the *turtle* library.

Translations of many projects, e.g. Rails-Admin, Rails-Translate.

Own projects. Some examples: BSc thesis, tutorials & walkthroughs, wrappers, extensions, websites.

Minor contributions to: HomeAssistant, Pyrandr, lib_iio, Ubiquo.

REFERENCES

Georgios Bakirtzis, Assistant Professor
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Relationship: MSc thesis advisor

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Relationship: Research collaborator

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