

Sergi Flores Marín

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About

- I am a final-year Artificial Intelligence student at UPC in Barcelona, currently on exchange at NTUST. My main interests are robotics and computer vision, with a particular focus on robot learning, especially at the intersection of perception and control.

Education

Artificial Intelligence Bachelor's Degree

- FIB - Universitat Politècnica de Catalunya | 2023 – 2027 expected

Exchange semester | Erasmus+

- National Taiwan University of Science and Technology | Fall 2026

Experience

Research Student | IRI (CSIC-UPC) | July 2026 – Current

- Researching diffusion policies for quadruped locomotion in Isaac Lab, focusing on trajectory-conditioned control, behavior transitions, and online fine-tuning with reinforcement learning.

GenAI Research Intern | MANGO | July 2025 – June 2026

- Developed and fine-tuned diffusion and virtual try-on models, trained fashion landmark detection systems, and contributed to multimodal computer vision pipelines.

Skills

- **Programming:** | Python | C++ | MATLAB | R | SQL | PDDL | TypeScript | Git | Linux | Docker |
- **Robotics & Simulation:** | ROS 2 | Gymnasium | Isaac Lab | MuJoCo | Gazebo | RViz | Nav2 |
- **AI & CV:** | PyTorch | TensorFlow | OpenCV | scikit-learn | NumPy | Diffusers | Transformers |
- **Languages:** | English - Cambridge First (B2) | French - DELF (B1) | Spanish (C1) | Catalan (C1) |

Projects

SENER-CEA Bot Talent | Nov 2025 – May 2026

- Developed an autonomous ROS 2 rover integrating localization, perception, navigation, and custom mechanisms. Our team completed all technical challenges and won the Technology and Design Awards.

Rubik's Cube Task & Motion Planning | June 2026

- Developed a hierarchical planning system for a UR3 robot to autonomously solve a physical 2x2 Rubik's Cube, combining task planning, motion planning, real-robot execution, and custom 3D-printed fixtures.

Awards

- **Technology & Design Awards** | SENER-CEA Bot Talent | May 2026
- **Global Nominee** | NASA Space Apps Challenge | Oct 2025
- **1st Prize** | BitsXLaMarató BSC Challenge | Dec 2024 & Dec 2025

Other Awards | 1st Prize Datathon FME 2024, AED (11-24) | 2nd Prize HackUPC, SEAT (05-25) | 2nd Prize HackEPS, Ingroup (11-25) |