Guillem Ribes Espurz

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Personal Statement

A passionate MSc Robotics graduate at the Technical University of Delft. Deeply intrigued in various fields including path planning, computer vision and visual language action models. Developed strong collaborative and communicative skills through diverse academic teamwork experiences with individuals possessing a range of abilities and backgrounds.

Skills

Python
C++
TensorFlow/Keras
Siemens NX (CAD)

ROS2
Linux
Git
Docker

Soft Skills: Leadership, Critical Thinking, Communication, Teamwork, Organization, Time-management

Education

MSc Robotics, Technical University of Delft   *Delft,* 2023-2025
- Achieved a 7.5 GPA with a Thesis grade of
- Relevant coursework: **Machine Learning** (TensorFlow, Keras, Scikit-Learn, PyTorch), **Path Planning** (MPC, RRT*)

BSc Mechanical Engineering, Technical University of Eindhoven   *Eindhoven,* 2020 – 2023
- Graduated with a 7.3 GPA and an 8.5 for the Bachelor Thesis
- Bachelor Thesis: Creating a shaft rescue robot prototype to save children stuck in boreholes.
- Extra Course/Exchange: Cybernetics & Artificial Intelligence at Technical University of Prague
  - Implemented in python: **A* search, alpha-beta pruning, and Markov decision processes.**

International School of Basel (ISB)   *Basel* 2017 - 2020
- Earned a Bi-Lingual Diploma (English, Spanish) with Chemistry, Math and Physics Higher Level as well as English Literature, Economics and Spanish at Standard Level
- Awarded and A for the Extended Essay in Mathematics and a B for Theory of Knowledge

Extracurricular Activities

Software Developer – Infrastructure (Robotics Team)   *Delft,* 2023-2025
- Specializing in Path Planning using RRT* for global path and MPC for local obstacle avoidance
- Oversaw the attacking and defending strategy
- Placed 5th in the 2024 Eindhoven B division

Hack Codex Junction Hackathon   *Riga*, June 2023
- Worked in a team of 5 software developers to complete a fully working website which helps Alzheimer's patients remember crucial details of themselves by using the power of LLMs like ChatGPT
- Ended up with an honorable mention of the competition.

Work Experience

Robotic Software Engineer Intern, Eurecat   *Barcelona, August 2024 – November 2024*
- Benchmarked several 3D SLAM and localization packages such as GLIM, Fast-LIO and RTABMap.
- Implemented full coverage path planning for a metro cleaning robot using Nav2.

Robotic Software Engineer Intern, Eurecat   *Barcelona, February 2025 – September 2025*
- Explored VLA models Octo and NVIDIA Gr00t to evaluate performance and generalization.
- Integrated LLM to introduce reasoning for such models.
- Used the Franka Emika FR3 to perform several tasks ranging from picking objects to opening objects.

Languages

Spanish: Mother tongue   **German:** A2
Catalan: Mother tongue   **French:** B1
English: Fluent   **Italian:** B2

Hobbies

DJing, Tennis, Fitness, Bouldering, Meeting people