

# Filippo Xausa

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[github.com/filippoxausa](https://github.com/filippoxausa)

## Education

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**Master Student in Artificial Intelligence Systems** *Sept 2026 - Present*  
University of Trento, Italy

**Bachelor Degree in Computer Science** *Sept 2023 – Jul 2026*  
University of Trento, Italy  
Final grade: 108/110

**Scientific High School Galileo Galilei, Trento, Italy** *Sept 2018 - Jul 2023*  
High School Diploma in Applied Sciences

## Experience

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**E-Agle TRT Formula SAE Team, Trento, Italy** *Jul 2025 – Present*  
Autonomous Driving System Software Developer

- Developing the **SLAM** module for driverless perception division.
- Implementing **LiDAR-inertial odometry**.

**Internship at Fondazione Bruno Kesler, Trento, Italy** *Feb 2026 – Jul 2026*  
BCS Thesis: "*Efficient neural networks for multispectral satellite image classification*"

- Develop and train **neural networks** models, evaluate and compare performance across different platforms.
- Optimize the trained models for **deployment on embedded devices** with limited computational resources.

**Huawei Research Center, Pisa, Italy** *Jul 2023*  
Project carried out during a one-week research stay at the Huawei Pisa RC

- Built smart resource allocation system with concurrency control and logging.
- Implemented database management, request processing, and simulation scenarios.

**Punto Verde Xausa, Trento, Italy** *2022 – Present*  
Agricultural and Gardening Products Store - Family Business

- Assisted in various roles including customer service, accounting, warehouse management, and cashier.

## Projects<sup>1</sup>

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**Wireless Robotic Rover**

- Built Embedded Rover with Remote Control over ESP-NOW and IMU tilt driving
- **Autonomous obstacle-avoidance** with US sensors and camera stream with a Python YOLO live-detection demo

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<sup>1</sup>The documentation and project code are publicly available on my GitHub profile [github.com/filippoxausa](https://github.com/filippoxausa)

## Cone Detection & Visual Odometry

- **Image-based perception** module developed for Formula Student driverless racing.
- Monocular visual **odometry** estimation using ORB feature matching and RANSAC pose recovery.

## Star Tracker

- Developed star detection and tracking with **OpenCV**.
- Implemented **visual odometry** to estimate stellar motion.

## Web Application for Emergency Communication "Ocio"

- Web application for real-time communication of emergencies, used by citizens and municipalities.
- Collaborated in a team of 3 students, using **Agile methodologies** and **CI/CD** with GitHub Actions.
- Personally contributed to **backend development** (Node.js + MongoDB), including REST API design, user authentication, and role management.

## Achievements & Extracurriculars

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### Informatics Olympiad in Teams

- 2023 – Italian OIS **National Winners**
- 2023 – International **IIOT** Competition in Egypt

### CyberChallenge.IT

*Mar 2025 – May 2025*

National Ethical Hacking training program organized by Cybersecurity National Lab

### Basketball player

*2012 - Present*

ASD Basket Pergine, captain of the Regional Division 2 Team

## Skills & Interests

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**Programming & Software:** C/C++, Java, JavaFX, Python, PyTorch, Node.js, SQL, Bash

**Tools & Platforms:** Linux, Docker, Git/GitHub, ROS2, CMake, Arduino, ESP32, MSP432 and Raspberry

**Databases:** MariaDB, MySQL, MongoDB

**Workflow & Methodologies:** CI/CD (GitHub Actions), Agile (Scrum, Kanban)

**Languages:** Italian (native), English B2 (Cambridge Certification)

**Interests:** Robotics, AI, Automotive, Computer Vision, Mountains and Agriculture