# Fernanda Sarahy Mancilla Núñez

Mechatronics & Software Engineer

0254460@up.edu.mx                                    (52) 4775794566

## Education

**Universidad Panamericana –** B.E., Mechatronics
August 2022 – August 2027, GPA: 3.35/4.0

## Member of Committee of the Mexican Olympiad in Informatics

January 2023 - Present

- I am actively involved in various aspects of the competition's management process. The process begins with a national competition, where the best contestants are selected and then prepared for the International Olympiad in Informatics. Additionally, there is a children's competition in Karel.
- I create problems (C++/Karel), teach advanced algorithm classes, oversee overall event organization, and take on other responsibilities.

## Head of the Programming Department at UPRobotics

August 2022 – Present

- UPRobotics is a robotics team representing Universidad Panamericana, which participates in various competitions, forums, and exhibitions. Our main robot is designed to assist in post-earthquake conditions, fires, gas leaks, etc.
- Created a fully teleoperated system in ROS2 (Robotics Operating System), including cameras, an Xbox controller, voice commands, an intuitive interface, and full control and odometry of a 6-axis arm in RViz and Gazebo.
- Developed a self-driving robot in ROS2 using a LiDAR sensor, simulated in RViz and Gazebo.
- Completed various computer vision codes to improve the autonomy of our robots. These codes include QR recognition in harsh conditions, object detection (e.g., chairs, tables, doors, humans, etc.), and chemical symbol recognition.

## Achievements

**OMI - Mexican Olympiad in Informatics**
- The Mexican Informatics Olympiad is a national computer science competition for pre-university Mexican students, around 120 students participate every year.
- I secured the Gold ($1^{st}$ place) in 2021, Gold ($3^{rd}$ place) in 2020, Silver ($14^{th}$ place) in 2019 and Gold ($2^{nd}$ place) in the kids' competition in 2018.

**IOI - International Olympiad in Informatics 2021**
- Represented the Mexican delegation in the most prestigious competition for pre-university students.

**ICPC – International Collegiate Programming Contest**
- Secured participation in the $47^{th}$ ICPC World Finals 2023 hosted in Egypt in my second semester. First place among Mexican teams.

**EGOI – European Girls Olympiad in Informatics**
- EGOI is an international competition aimed at promoting girls' participation in STEM areas. I earned a Silver medal in EGOI 2022 hosted in Türkiye, ranking among the best female competitive programmers in the world.

**State Giant of Innovation & ROBOCUP Rescue League Participation**
- The UPRobotics team won the best Innovative Project award in Aguascalientes in 2023. Participated twice in the ROBOCUP Rescue League, the most prestigious robotics competition in the world.

## Skills

C/C++, ROS2, Python, SLAM, GNU/Linux, GitHub, Git, SQL, mechanical workshop tools, microcontrollers, *leadership & teamwork, organizational charts and versatility*.