

# KARINA RUIZ-TRON

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## Summary and Personal Objective

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I am a Robotics and Digital Systems Engineer student. I am looking for professional experience on embedded systems and manufacturing robotics. I have great capacities of teamwork, troubleshooting skills and critical thinking, furthermore. People often recognize me for my leadership skills in team projects. I have a growth mindset, resilience and flexibility essential to ensure excellent results in my work.

## Academic Background

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### Robotics and Digital Systems Engineering

August 2021 – Present

*Instituto Tecnológico y de Estudios Superiores de Monterrey Campus Ciudad de México*

*Mexico City, Mexico*

## Experience

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### Intel Corporation

February 2023 – March 2023

*Final Project of Programmable Logic Design*

*Mexico City, Mexico*

- Objective was to design the first phase of an intelligent embedded system (better known as Cyber-Physical System or CPS), according to the requirements of Intel Corporation. This system worked with the use of a FPGA (field programmable gate array) and a peripheral component such as a joystick in charge of controlling the game programmed.

### HACKMX5 - Third Place Winner

October 2023

*Emergency response using signal processing systems*

*Mexico City, Mexico*

- Interpretation and transcription of 911 calls with the objective of classifying those who may be prank calls or the ones that require immediate attention. Apart from the software part, it also contains a display which showed who was calling and the location of the incident, plus an integrated alarm to inform the police or firefighters of the emergency.

### Ibero-American Canned Satellite Contest

May 2023

*CANSAT*

*Mexico City, Mexico*

- I worked alongside other 4 teammates in the fabrication of a canned satellite that needed to send signals to the ground computer and to arrive safely protecting an egg in its interior.

## Technical Skills

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**Languages:** Spanish (Native Speaker), English TOEFL IBT 95 pts, French A1

**Programming Languages:** Python, C, C++, HTML/CSS, JavaScript, AVR Assembly

**Technologies:** ROS2, MATLAB/Simulink, Microcontrollers, Microsoft Office

## Leadership / Extracurricular

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### Peer Program

August 2022 – Present

*Tutor*

- I shared knowledge and experience with students in their freshman year to help them adapt to the school's campus and system, in order to be accepted, applicants must participate in psychologic tests and different interviews.

### Beautiful Patterns

Summer 2022 & 2023

*Instructor*

- I taught web design lessons to girls between ages 12 to 17 in a one weeklong camp where they developed computational development in the languages of HTML, CSS and Java. The second objective of women teaching girls was to inspire them to be interested in STEM areas.

### First EDS Student Meeting: climate change, problems and perspectives

June 2023

*Participant*

- I participated in dialog tables with students in different careers and different campuses about climate change. There were also participating expertise in the field.

### School Group Code.it

August 2021 – June 2022

*Secretary*

- My job there was close to the role of secretary, where I directed the group alongside the group's President and Vice-President. I also made a variety of events for engineering students in order to unify the community and promote the STEM fields.

### School Group Ada Women

August 2021 – June 2022

*Administrator of Social Activities*

- I was in charge of directing activities focused on the benefit it would have in our community seen from a social perspective and respecting the group's objective to recognize women's work in STEM fields.