# LUIS RODOLFO MACIAS

+52 664-157-8067 ⋄ Tijuana, B.C. Mexico ⋄ mjluisrodolfo@gmail.com ⋄ https://luisrodolfo10.github.io

Enthusiastic cybernetic engineering student, very passionate about robotics and computer vision research, and constantly acquiring new knowledge to apply to different fields of robotics.

## EDUCATION

**Bachelor in Science in Cybernetic Electronic Engineering** 2018-2022
CETYS Universidad, Tijuana, Mexico
CGPA: **97/100**

## RESARCH EXPERIENCE

**Resarch assistant** Feb 2019 - Dec 2022
CETYS Universidad *Tijuana, B.C. Mexico*

- Assisted in the research and development of autonomous mobile robots.
- Developed control systems for an embedded single-board computer and a microcontroller with various sensors (LiDAR, RGB-D camera, Accelerometers, Encoders, etc.).
- Develop guides for setting up and working with different robots and sensors using different NVIDIA Jetson embedded systems (TK1, TX2, Nano)

**Resarch assistant** Feb 2021 - Oct 2021
National Polytechnic Institute of Mexico CITEDI *Tijuana, B.C. Mexico*

- Assisted in the research and development of a mechatronics system focused on educational material for learning about computer science topics.
- Developed the control system for the microcontroller of the project and a computer simulation in Python

## PUBLICATIONS

Luis Rodolfo Macias, Kenia Picos, and Ulises Orozco-Rosas "Driving assistance algorithm for self-driving cars based on semantic segmentation", Proc. SPIE 12225, Optics and Photonics for Information Processing XVI, 1222505 (3 October 2022); https://doi.org/10.1117/12.2634076

Luis Rodolfo Macias, Ulises Orozco-Rosas, and Kenia Picos "Simultaneous localization and mapping using an RGB-D camera for autonomous mobile robot navigation", Proc. SPIE 11841, Optics and Photonics for Information Processing XV, 118410M (1 August 2021); https://doi.org/10.1117/12.2594033

## PROFESSIONAL EXPERIENCE

**Software Development Engineer in Test** Aug 2021 - Present
Dexcom *Tijuana, B.C. Mexico*

- Developed several test cases for the Dexcom G6 application & transmitter
- Worked on several test plans in an agile environment for a medical product

## ACHIEVMENTS

**TE AI Cup** Sep 2021 - Mar 2022
TE Connectivity *Hermosillo, Son. Mexico*

- Computer vision competition to solve an industry problem between different regions across Mexico and China.

**United Space School 2019** Aug 2019
Foundation for International Space Education *Houston, TX*

- I was selected for the sponsorship of Tierra Luna Engineering LLC to participate in the summer program of 2019 United Space School in Houston TX in collaboration with several NASA employees, with 28 other students from 15 countries.