Eduardo García Rougon

Digital Systems and Robotics Engineering

Objectives, Competencies and Interests

I look forward to the development of new technologies that could contribute to the resolution of problems related to robotics and artificial intelligence, working in software and hardware programming.

Soft skills: Foster productive teamwork; strive for superior results; manage complex business activities; coach, develop and manage others.

Hard skills: efficient resolution of problems through programming, experience at working with microcontrollers and FPGAs.

Academic Studies

– ITESM Campus Querétaro   2016 - 2021   Digital Systems and Robotics Engineering

- Automation and manipulation of drones through the use of IMUs controlled with Python programming.
- Construction of Agribot with manual and semi-autonomous modes controlled by ROS and Arduino.
- Construction of space exploration robot for humidity testing controlled remotely using ROS.

Softwares

- Code Blocks (C)
- CodeVision, LabWindows CVI (C hardware)
- Cloud 9 (C++)
- Eclipse, SpringBoot (Java)
- Xilinx Navigator (VHDL)
- Vivado (Verilog)
- Spyder (Python, OpenCV)
- React Native (Java Script)
- Android Studio (Kotlin)
- Django (HTML, Bootstrap)
- Parallel programming (Java Threads, Fork-Join, OpenMP, TBB, CUDA)
- Visual Studio (C#)

Languages

- Spanish (native language)
- English (FCE B, BULATS 647, TOEFL 557)
- French (Level A1)
- Japanese (Level A1)

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Laboral Experience

– Pro Karma   March 2020 – January 2021   ITP Trainee

- **Activity:** Intensive Training Program that consisted in learning Java and JavaScript oriented towards web applications and database creation, as well as developing mobile applications using Android Kotlin and React Native.
- **Results:** Built different web applications using servlets and storage of persistent information in databases, one mobile app that gave global data about COVID-19, as well as an app simulating an online shop for Mexican products.

– Mexican Institute of Transportation   February – May 2021   App Developer

- **Activity:** Six months project for developing an alternative application for transit security evaluations with given requirements by the institute.
- **Results:** Built a desktop application that is able to capture images from a video and code different parameters following iRAP protocol.

– Velta, Dood   June 2021 – August 2021   Software Developer

- **Activity:** Software developer for a company in charge of managing accounts for investors regarding balance and crypto coins.
- **Results:** Developed designs and Back End elements of the webpage for the crypto coins exchange, like authentication and database, using Django.

Projects and participations

ITESM Science and Technology exhibitions
2016 - 2021

- Videogames on FPGA and microcontroller controlled with ultrasonic and capacitive sensors respectively.
- Car cluster on CVI and car lights controlled with CAN protocol.
- AES algorithm on microcontroller and FPGA.
- Web application for authenticating and managing inventories on database with stashes, categories and items.
- Surveillance camera with OpenCV that records and takes pictures with face and movement detection.