

Edgar Adolfo Ochoa Mendoza

San Diego, California
edgar.ochoamendoza@gmail.com

SUMMARY

Mechatronic engineering student with one year of experience building and designing mechanical and electronic systems for all-terrain vehicles for Baja SAE competitions and Aerospace competitions. Looking for an experience opportunity in the robotics and aeronautic field.

EXPERIENCE

02/2022

until today.

Telemetry designer | Mad Rams GDL (student group)

Student group focused in develop all-terrain vehicles for Baja SAE competitions.

- Design, implement, and manage electronic systems for telemetry.
- Design 3D CAD models and manufactured mechanical components to mount telemetry sensors.
- Design and simulate low voltage and efficient circuits.

02/2022

until today.

Manufacture technician | Momentum Aerospace (student group)

Student group focused in develop rockets with payload.

- Design and develop G code in Fusion 360 for CNC machine parts.
- Operation of milling machine, lathe, electrode welding, microwire welding, and general tool of the metal.
- Experience working with fiberglass and resins.
- Interpretation of drawings of mechanical parts and deciding the best manufacturing method to carry them out.
- Ensemble of electrical systems (fly computer).

08 / 2022 to

12 / 2022

Research intern | Biomechatronic lab / Tec de Monterrey campus GDL

Working on the development and validation of a capsule for taking tomography with thermal images.

- Write electronic design documentation for biomedical equipment.
- Development and test of software to control biomedical machinery (Python, C, MATLAB)
- PCBs design, manufacture, and test. (Eagle / Fusion 360)
- Data collection for future improvements

Relevant projects

02/2022

until today.

SCARA ROBOT | Design and development of robots (class project)

Design and development a SCARA robot of 3 dof with a Cognex camera to select and translate objects.

- Calculation and simulation of kinematics and control equations with MATLAB and Coppelia.
- Design and simulate low voltage and efficient circuits for step motors.
- Computer vision application to recognize objects and obtain positions using Cognex cameras.
- Control of actuators embedded system to apply PID speed and position control.

08/2022

12/2022.

Fifth wheel| Implementation of mechatronic systems (class project)

Development of a fifth wheel to couple to a wheelchair for automatization.

- Design and develop of G code in Fusion 360 for CNC machine parts.
- Design a PCBs design, manufacture, and test. (Eagle / Fusion 360)
- Design of embedded system to apply PID speed, position control and sensor measurement.
- Development and test of software for implementation of UART and I2C protocol. (C)
- Circuits simulation.

EDUCATION

August 2022

Until today

Bachelor in mechatronic engineering

TECNOLÓGICO DE MONTERREY / GUADALAJARA, MÉXICO

SKILLS

- Software
 - Python (5 years)
 - SolidWorks (1 year)
 - MATLAB (2 years).
 - LTspice (1 year)
 - C (1 year)
 - Office (+10 years)
- Language skills:
 - English: fluent
 - French: beginner
 - Spanish: mother tongue
- Aptitudes:
 - Communication skills
 - Teamwork
 - Creativity
 - proactivity

Certifications

- Advanced Robotics: Certificate "Mexico connected"
- Digital skills: Santander skills certificate "Digital skills"

Portfolio

- <https://edgar8a30.github.io/devportfolio>