

# Gerardo Treviño

+528125679570 | geratrevino115@gmail.com | geratrevino.com | MX

## EXPERIENCE

---

### Spacelab MX

Monterrey, NL

*Computer Vision Engineer*

May 2022 – Present

- Designed and developed computer vision algorithms comparing models and methods for autonomous drones, enabling efficient object identification using deep learning models like DETR, SAM and YOLO with frameworks such as PyTorch and NVIDIA DeepStream.
- Developed scripts for both backend and frontend of applications to integrate and effectively use vision technologies, allowing the implementation of algorithms and the visualization of results in interactive and user-friendly interfaces.
- Implemented image processing techniques to enhance the quality and clarity of visual data, including designing and creating custom programs to apply filters, color corrections, noise removal, and other transformations to facilitate information extraction from images.
- Collaborated closely with interdisciplinary teams to integrate computer vision solutions into security and defense projects.

### CIMA

Querétaro, QRO

*Computer Vision Research*

June 2020 – April 2022

- Researched and developed hybrid models for object detection, combining deep learning techniques and stochastic optimizers, achieving improved detection accuracy.
- Implemented computer vision algorithms on embedded systems, optimizing performance and computational efficiency for real-time applications using YOLOv3 Tiny.
- Collected, processed, and analyzed data for predictive modeling in data science to obtain relevant insights and generate reports that drive decision-making.

### INDUTELSA

Saltillo, COA

*Industrial Application Developer*

March 2019 – November 2019

- Developed hardware, devices, and software to set up workstations for clients in C#, ensuring specific user needs. This setup included installation, integration, and customization of equipment and software according to client requirements.
- Prepared cost estimates and bid documents by studying clients' requests for proposals (RFP) and consulting with project managers.
- Implemented devices such as HMI and PLC from Allen Bradley/Siemens/Turk, RFID, and Andon systems for workstation and plant operation.

## PROJECTS

---

### Skyprotector

- Surveillance system designed for industrial sites, enabling early detection of intrusions and quick response to emergency situations using a combination of drone technologies.

## EDUCATION

---

### M.Sc. in Artificial Intelligence

*Autonomous University of Querétaro*

Jun. 2020 – Dec. 2021

Querétaro, MX

### B.Sc. in Electronics

*Autonomous University of Coahuila*

Aug. 2015 – Dec. 2018

Coahuila, MX

## SKILLS

---

**Languages :** Python, JavaScript, HTML/CSS, SQL (PostgreSQL, MySQL), C#, C++

**Tools :** Pytorch, Docker, AWS, Figma, Notion, Jira, GitHub, Arduino, OpenCV, FastAPI.