

Armando Terrazas Gómez

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EDUCATION

Tecnológico de Monterrey

B.S. in Computer Science and Technology; GPA: 98/100

Zapopan, JAL

Aug. 2021 – Jun 2025

PROJECTS

IoT Earthquake Detection System

Python, NoSQL, Firestore, HTML5, CSS, JavaScript, Bootstrap

September 2022 – Present

Tecnológico de Monterrey

- Worked in a team to complete the project, where I was the scrum master and developer
- Utilized Raspberry Pi and accelerometer to measure earthquake intensity in Python
- Programmed a camera to count people in a room using Tensorflow Lite and OpenCV
- Built a webpage called Rescue Helpers to visualize data from Firestore
- Allows for quick rescue efforts in case of building collapse

Non-Invasive Polygraph

Python, Tensorflow, Scikit-Learn, Pandas, OpenCV, Microsoft Azure

Nov. 2022 – Present

Tecnológico de Monterrey

- Developed non-intrusive polygraph to identify lies in a statement
- Used Machine Learning model to analyze statement and determine if it is false or not with 61% accuracy
- Analyzed eyes movement and head posing using trained machine learning models
- Utilized Microsoft Cognitive Services for speech-to-text and sentiment analysis

Malaria Detection Simulation

Matlab

April 2022 – May 2022

Tecnológico de Monterrey

- Designed with my team a 3D dielectrophoresis simulation in Matlab to detect malaria in red blood cells
- Used electric field between 2 plates and attraction force of red blood cell to detect infection
- Served as team leader and contributed to design of 3D plates and algorithms for charge calculation
- System shows how would dielectrophoresis allow for early treatment of malaria by accurately detecting infection

AWARDS & CONTEST PARTICIPATIONS

ICPC Training Camp Mexico | *Tecnológico de Monterrey*

January 2023

- Participated in a training camp for competitive programming, learning different algorithms and data structures.

Stella Pre-incubation Phase 1 Scholarship | *Tecnológico de Monterrey*

November 2022

- Received a scholarship from Tecnológico de Monterrey for a team project: IoT Earthquake Detection System.

Academic Merit Award | *Tecnológico de Monterrey*

September 2022

- Two time consecutive awarded for one of the best GPA in the Science and Engineering Major in Tecnológico de Monterrey.

HackMTY 2022 | *Tecnológico de Monterrey*

September 2022

- Participated in the 2022 Hackathon of Tecnológico de Monterrey, where with my team we developed a Machine Learning model able to identify and sort automatically different types of garbage.

SOCIAL SERVICE

English and French Teacher | *Tecnológico de Monterrey*

Sep. 2022 – Nov. 2022

- Volunteered as an English and French Teacher for children in the Language Learning Center In Tecnológico de Monterrey.

TECHNICAL SKILLS

- **Web Development:** HTML5, CSS3, Bootstrap, React
- **Programming Languages:**
 - **Python:** 18 months experience. Machine Learning and Data Analysis
 - **C++:** 18 months experience. OOP and data structures
 - **Matlab:** 1 year experience. 3D and 2D physical modelling
 - **JavaScript:** 3 month experience. Use of React
- **Tools:** Git, Unix Command Line, Jupyter Notebooks, GitHub, Pandas and VS Code