

# ALEJANDRA COETO SÁNCHEZ

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Web page (portfolio):  
<https://alecoeto-portfolio.vercel.app/>

## EDUCATION

### Tecnológico de Monterrey Computer Science Engineering

Aug 2022 - June 2026  
GPA: 98.5/100

Relevant courses: Data Structures (C++),  
Software Construction (C#, ASP.NET), Device  
Interconnection (Packet Tracer)

### Prepa Tec Eugenio Garza Lagüera (2019-2022) International Baccalaureate Diploma

IB score: 42/45  
GPA: 98/100  
Academic Honors

Relevant courses:  
Computer Science HL (Java) 7/7  
Business and Management HL 7/7

## WORK EXPERIENCE

### Google - Cloud Apps

STEP Intern

Jun 2024 - Sept 2024

- Google STEP (Student Training in Engineering Program) intern in the Cloud GEM Devices team. (Google Endpoint Management)
- Developed new "Show last known location" feature for company-owned lost devices through the Admin Console, displaying a dialog containing a map with a marker and a window with lost details and geocode address after fetching the info from the device.
- Completed design process and **full stack** implementation using **java**, **javascript**, **gRPC**, **Google Maps API** and internal frameworks.

### ITESM Oncampus Intern

DevOps

Feb 2024 - Present

- DevOps** at Crowd Counting project, aiming to collect environment information from a park through cameras and sensors.
- Evaluating and implementing **re-identification models** for multi-camera people tracking with anchor-guided clustering.
- Programming with python, **pytorch**, **openCV** and **yolo**. Using **Conda** environments in an **Azure Linux VM**.
- Developing APIs to host different vision algorithms such as birds-eye-view using **Docker**, **AWS**, **FastAPI** and **bash** scripts.

## PROJECTS

### Swift Student Challenge

Jan 2024

Distinguished Winner

- Programmed a climbing app using **Swift**, providing tips, tracking user progress and showing an AR view of different climbing holds.
- Implemented an AR view using **AR Kit**, **Reality Kit** and **Combine**, as well as monitoring progress with **Core Data** and **Charts**.
- Recognized as a **Distinguished Winner** of the **international Swift Student Challenge** (only 50 distinguished winners), attending WWDC 24.

### Security system IOT

Nov 2023

3rd Place

- Developed a **security system** prototype for the elder, allowing entry to the house with face recognition, showing of logs of sensors connected to an **ESP-8266** through a **React web app**, establishing communication through **AWS Websocket API**.
- Programmed a **face recognition API** using **flask**, **docker**, face-recognition and python, hosting it with **AWS EC2** and **ELB**.
- Presented the project in **Expo-Ingenierías 2023** (over 100 teams) and achieved **3rd place** in the entrepreneurship category.

### Frida-Assistant

Sept 2023

1st Place

- Developed a **Next app** that allows users to store information, analyze it and find data through a semantic search and **Open AI chat**.
- Achieved **1st place** out of over 100 teams with my team of four in **HackMty 2023** in the Softek challenge.
- Integrated text to speech using **AWS Polly**, developed backend using **TRC** and front end with **React**.

## COMPETITIONS

### Robocup @Home

Aug 2023 - Present

2nd Place

- Developing **computer vision** algorithms for **Face Recognition**, person **Tracking**, person and pose analysis and object detection.
- Integrated modules for a service robot using **ROS**, **Docker**, **OpenCv**, Mediapipe, **Re-ID** models, **YOLO** and **clustering** algorithms.
- Achieved **2nd** place with a team of 12 in the National Robotics Tournament, classifying to the international competition.

### ICPC Grand Prix

3rd Place

- Actively participating in **ICPC** (International **competitive programming** competition) and ITESM Competitive Programming Club.
- Achieved **3th** place with a team of three in the campus placement of ICPC Mexico's Grand Prix. (Sept 2023)
- Currently classified for the National ICPC Competition 2024.

### Robocup Soccer

3rd Place

- Developed two autonomous soccer playing robots by programming sensor libraries, vision and movement algorithms.
- Used **arduino CLI** and **C++** for robot control and **micro-python** for **computer vision algorithms**.
- Achieved **3rd place** with my team of three in the national Robocup Soccer L. competition with **Roborregos**. (Apr 2023)

## LEADERSHIP

### Roborregos

Dec 2022 - Present

President

- Software developer and president of the **representative Robotics Team** from Tecnológico de Monterrey.
- Competed in regional, national and international robotics tournaments representing ITESM.
- Leading** and **organizing** the yearly on-campus robotics competition **Candidates 2024**, with over 300 participants.

### WIT

Mar 2023 - June 2024

Vicepresident

- Coordinating the student group **Women in Technology** from Tecnológico de Monterrey as vicepresident.
- Organizing events with my team to enhance the progress of women in tech and promote inclusiveness, impacting over 100 students.
- Taught programming** and app development with the MIT App Inventor tool to 20 middle school students.

### VOLTEC Robotics

Aug 2019 - May 2024

Mentor

- Mentored** the **FIRST FTC** (20 students) and **FRC** (over 20 students) teams, achieving top 10 in the national FTC competition.
- Taught **robotics** and **java** programming to more than 20 middleschool and highschool students.
- Led the engineering department of the high school team VOLTEC Robotics (30 - students). (2022)

## PROGRAMMING LANGUAGES

4 years    Java, C++, Python  
2 year    Javascript, Typescript  
>1 year   Swift, C#, Matlab

## TECHNOLOGIES

Git, HTML, CSS, React.js, Next.js, TailwindCSS, ROS, ROS2, OnShape (CAD),  
Lightroom, Arduino, Node.js, MongoDB, VSCode, MacOS/ Linux environments,  
SQL, Azure Services, Node.js, Bash, ZSH, YOLO, Computer vision, Prisma, OAuth,  
Vercel, TRPC, OpenCv, mediapipe, face-recognition, AWS (Amazon Web  
Services), OpenAI, Flask, Conda, ASP.NET, Unity, gRPC, Google Cloud.

## LANGUAGES

English (C1)  
German (B1)  
Spanish (Native)

## AWARDS

April 2024    **2nd** place in Robocup @Home National Competition (teams)  
Jan 2024    **Distinguished winner** in Swift Student Challenge 2024  
Oct 2023    **1st** place in NASA Space Apps (Campeche) | Top 40 Global (teams)  
Sept 2023    **1st** place in HackMty 2023 in the Softek Challenge (teams)

April 2023    **3rd** place in the Robocup Soccer Mexican Tournament (teams)  
April 2023    **Distinguished Students in Engineering** Recognition (top 1%)  
June 2022    Diploma for **student development** and sport leadership  
May 2022    Diploma *Orgullo Prepa Tec* and Best Grade Averages