# **ALEJANDRA COETO SÁNCHEZ**

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#### **EDUCATION**

# Instituto Tecnológico y de Estudios Superiores de Monterrey - ITESM

Computer Science Engineering (Expected June 2026) GPA: 98.5/100

# **WORK EXPERIENCE**

#### Google - Youtube Ads

SWE Intern (Jun 25 - Aug 25)

- Developing an ads platform feature to allow brand partners to identify specific brand mentions in a Youtube video.
- Enhancing C++ pipeline to perform brand recognition in transcripts, implementing and analyzing word-matching and LLM approaches.
- Implementing full stack solution using Dart and internal tools to fetch, process and display brand mentions and timestamps in a video.

#### Oracle - 5G Networks

SWE Intern (Feb 25 - Jun 25) Mty, Mexico

- Software Engineering intern of Oracle's 5G Networks team, working in backend microservices development. Utilized java, docker, and kubernetes to develop, deploy, and manage microservices of the 5G infrastructure.
- Resolved bugs and implemented enhancements, collaborating within an Agile development environment.

# **Google - Cloud Apps**

STEP Intern (Jun 24 - Sept 24) Sunnvvale, California

- 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 24 - Dec 24) Mty, Mexico

- 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

Feb 2024, Feb 2025 Distinguished Winner & Winner

- Developed a rock climbing app using Swift, AR and Reality kit to provide tips, track user progress and and visualize different holds via AR. (2024)
- Developed an app using Vision Framework and CreateML to empower visually impaired indoor climbers by providing a colorblind mode for route differentiation and an audio-guided mode that provides descriptions of reachable holds according to current body position. (2025)
- Recognized as Distinguished Winner 2024 (only 50) and Winner 2025 (only 350), attending Apple's Worldwide Developer Conference 24 & 25.

#### HowlX

Feb 2025 - May 2025 1st Place

- Developed a web platform and iOS app for NEORIS's Digital Consulting area that analyzes customer service conversations by providing real-time transcription, emotion analysis, topic detection, and key metric reports to improve customer service.
- Programmed full stack app with NextJs, integrated Al and embedding modules and developed companion iOS app with Swift.
- Achieved 1st place at Expo-Ingenierías (over 100 teams) and recognized as best development solution by Neoris (from 6 teams)

### **Security system IOT**

Nov 2023

- 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.

#### COMPETITIONS

# Robocup @Home

Aug 2023 - Present 2nd Place

- Lead of the computer vision team, implementing algorithms for human analysis (identification, pose analysis, etc.), and object detection. Integrated modules for a service robot using ROS2, Docker, OpenCv, Mediapipe, Re-ID models, YOLO and clustering algorithms.
- Achieved 2nd place with my team in the National Robotics Tournament, classifying to the international competition.

# **ICPC Grand Prix**

Feb 2023 - Present 3rd Place

- Actively participating in ICPC (International competitive programming competition) and ITESM Competitive Programming Club.
- Achieved top 25 in ICPC Mexico National Finals with my team of three (Nov 2024).
- Achieved 3rd place with a team of three in the campus placement of ICPC Mexico's Grand Prix. (Sept 2023)

# **LEADERSHIP**

#### Roborregos

President (Dec 22 - Present)

- Software developer and president of the Representative Robotics Team from Tecnológico de Monterrey: RoBorregos.
- Competed in regional, national and international robotics tournaments representing ITESM.
- Led and organized the yearly on-campus robotics competition Candidates 2024, with over 300 participants.

Vice-president (Mar 23 - Jun 24)

- 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.

April 2023

#### PROGRAMMING LANGUAGES

# **TECHNOLOGIES**

# **LANGUAGES**

4 years Java, C++, Python 3 years Javascript, Typescript 2 years Swift <1 year C#, Matlab

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

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

# **AWARDS**

Feb 2025 May 2025 Oct 2024 Sept 2024 April 2024 Swift Student Challenge Winner 2025 2nd place in Robocup @Home National Robotics competition 1st place in NASA Space Apps - Mugica (teams) Distinguished Students in Engineering Recognition (top 1%) 2nd place in Robocup @Home National Competition (teams)
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Feb 2024 Swift Student Challenge Distinguished Winner 2024 Oct 2023 1st place in NASA Space Apps (Campeche) | Top 40 Global (teams) Sept 2023 1st place in HackMty 2023 (teams) April 2023 3rd place in the Robocup Soccer Mexican Tournament (teams)

**Distinguished Students** in **Engineering** Recognition (top 1%)