Gilberto Malagamba

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EDUCATION

CETYS University International Campus Ensenada   2020-2023

High School Bilingual Program – Awarded with the highest honorific mention   *GPA 100/100*

Monterrey Institute of Technology and Higher Education Campus Monterrey   Graduating in June 2027

Bachelor of Science in Computer Engineering   *GPA 98.4/100*

WORK EXPERIENCE

Smiley   2023 - 2024

Developed a new web page for a local party's group in Monterrey sponsored by FourLoko, Palmar, Prudence and Jagermeister

- Used the JavaScript framework Angular with Tailwind CSS. Employed Google's Firebase to develop account authentication, ticket purchasing and confirmation, current and past event's information storage and display;
- We currently have 1271 accounts registered.

PDEI United   2023 - 2024

Currently developing a web page for a soccer company that distributes courses, receives applications for visors and handles payments

- Using Figma to design the markup for the page;
- Developing using the JavaScript stack Next.js with Tailwind CSS.

MAJOR PROJECTS

Mexican Informatics Olympiad   2020 - 2023

A countrywide Mexican competition focused on competitive programming and design of algorithms

- Won a gold medal in the regional stage (OMIBC 2021);
- Placed 36th and won a bronze medal in the national stage (OMI 2021);
- Took the training program for the International Olympiad in Informatics for the Mexican team two years (IOI 2021 and 2022);
- Placed 16th and won a silver medal in the national stage (OMI 2022);
- Became president of the competitive programming club at my high school and taught 2 sessions per week on algorithms and data structures in CPP (2022).

Hackathons   2021-2024

List of the hackatons I have competed in

- Participated on York's University's 36-hour hackaton and submitted a web project called "Speed Stocks which simulated common trends in the stock market (2021);
- Won 3rd place in the 48-hour international hackaton CODICON by Lexpin in which my team of 4 members developed a pygame that simulated a car's manual transmition (2024);
- Demoed a flutter mobile app with geolocation and firebase backend at MLH's Lincehacks (2024).

FIRST Tech Challenge   2022 - 2023

An international robotics competition for high schoolers which promoted gracious professionalism and teamwork

- Led the team and worked as the solo programmer while also being part of the build and design team;
- Made it to the regional stage of the United States league and won the promote award;
- Made it to the semifinals in the national stage of the Mexican league;
- During the competition I used Java and the Android SDK to program an autonomous routine for the robot and the controls for the human drivers.

RoBorregos   2023 - 2024

I am a programmer for the RoBorregos robotics team, a student's group in ITESM that competes in various worldwide competitions

- Joined through the Candidates competition which is made by team members to scout talent and pick new members. Employed the following technologies: Arduino along with numerous libraries, VS Code and Git. Developed a PID motor control based on gyroscope, a Depth First Search to solve the maze section of the competition and integrated other sensors like ultrasonic, TCS, and LCD screen;
- Won 2nd place at the national Robotics Mexican Tournament in the RoboCup Jr. Rescue Maze competition. Me and my four member team developed an autonomous robot that must solve a maze and perform various tasks depending on the environment. I have worked on a PID control using a hierarchy for different sensors, a Depth First Search algorithm using Dijkstra's shortest path for the robot to explore the maze and serial communication between a Jetson Nano and an ESP32, all in C++ and Arduino.

SKILLS

PROGRAMMING LANGUAGES

4 years: C#, C++
3 years: Java
1 year: Python
6 months: MATLAB, TypeScript

TECHNOLOGIES

Unity, Arduino, Android SDK, Git, HTML, CSS, Tailwind, Angular, React, Next.js, TypeScript, Firebase.

AWARDS AND OTHER COMPETITIONS

Bronze Medal in the OMI in the national stage (2021)
Silver Medal in the OMI in the national stage (2022)
4th place at the XXXVI Regional Basic Sciences Event (2022)
Promote Award at FIRST Tech Challenge regional stage California (2023)
2nd place at the Robotics Mexican Tournament in the Rescue Maze Jr. league (2023)

GENERAL

Music production, piano and bass player, drawing and painting experience, digital art and vector design, TOEFL ITP C2 English level.