

Carlos Enrique García Díaz

cegarciadd@gmail.com | www.linkedin.com/in/ce-garcia

EDUCATION

Tecnológico de Monterrey, Mexico

M.Sc. in Artificial Intelligence

Apr. 2025 – Present

GPA: 100/100

Tecnológico de Monterrey, Mexico (Monterrey, NL)

B.S. Mechanical and Electrical Engineering

Aug. 2018 – Dec. 2022

GPA: 98.24/100

Highest GPA of the 124th generation of Mechanical and Electrical Engineering

Massachusetts Institute of Technology, USA (Cambridge, MA)

Summer stay, Jun. – Jul. 2022

One-week hands-on introduction to microfabrication technology using the diverse toolsets of MIT.nano.

Micro- and Nanofabrication Techniques I & II (Tecnológico de Monterrey)

Advisors: Luis Velázquez-García, Ph.D. and Adriana Vargas, Ph.D.

WORK EXPERIENCE

John Deere

Enterprise Technology & Engineering Center (San Pedro, NL, Mexico)

Sep. 2022 – Present

Manager: Abraham Martinez, M.S.

| Electrical Design Engineer

- Created harness schematics, models, and drawings for the manufacturing of new electric and combustion tractors.
- Conducted circuit analyses and simulations to validate safety features comply with industry standards.
- Executed mechanical bracket designs to securely retain electrical components and optimize space.
- Supported the back-end development of internal applications, enhancing overall efficiency using Python and VBA.

Diram

Design and Specification Center

Sep. 2021 – Mar. 2022

Manager: Edder Cázares, M.E.

| Power Quality Solutions Intern

- Conducted power quality analyses to ensure compliance with national regulations and industry standards.
- Designed power quality solutions using power banks and harmonic filters according to customer needs.

Tecnológico de Monterrey

Engineering and Computerized Design Dept.

Feb. 2020 – Jul. 2020

Manager: Teresa Soriano, M.S.

| Teaching Assistant

- Supported classroom and laboratory instruction by assisting engineering students in effectively using CAD software.
- Provided guidance to engineering students, enhancing their models and manufacturing drawing deliverables.

CORSES, PROJECTS AND COMPETITIONS

SAE International

Formula SAE Competition 2025 (Michigan, USA)

May 2024 – Dec. 2024

Advisor: Manuel Martinez, Ph.D.

| Electrical Design Mentor

Contributed to the electrical development of a high-performance single-seater Formula SAE electric vehicle.

Mentored the team in the use of CAD and electrical software to meet specifications of FSAE rules (2024).

Massachusetts Institute of Technology

MIT.nano Course (Cambridge, MA, USA)

Jul. 2021, Jun. 2022 & Jun. 2025

Advisor: Luis Velázquez-García, Ph.D.

| Certified

One-week hands-on introduction to microfabrication technology using the diverse toolsets of MIT.nano.

Tecnológico de Monterrey

EVSE Development Project (Monterrey, NL, Mexico)

Mar. 2022 – Jul. 2022

Advisor: Jesús Valdez, Ph.D.

| Research

Research group assistant for the development of an electric vehicle type two charger.

Tecnológico de Monterrey

Impulso International Congress (31st and 32nd Edition, Mexico)

Nov. 2020, Nov. 2021 & Mar. 2025

Advisor: Mauricio Mojica, M.S.

| Presenter

Mechanical Engineering International Congress organized by engineering students of Latin America.

Instructed CAD workshop instructor and presented certification preparation courses.

SAE Mexico

Baja SAE Mexico Competition 2019 (Toluca, Mexico)

Nov. 2019 – Mar. 2021

Advisor: Mauricio Mojica, M.S.

| Participant – 23rd place

Highly contributed to the design of single-seater off-road Baja vehicle for university competition.

Improved placement by ten positions from the previous year's competition, securing a top 25 spot.

HONORS AND AWARDS

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| • Top Performer (1 st place) Award of Fiscal Year 2025 Q3 – John Deere ETEC EER | 2025 |
| • Institutional 100% Scholarship for Academic Excellence – Master's Degree | 2025 |
| • Most Valuable Engineer Award of Fiscal Year 2024 Q1 – John Deere ETEC EER | 2024 |
| • Highest GPA of the 124 th generation of Mechanical and Electrical Engineering | 2022 |
| • Honorable Mention of Excellence from Tecnológico de Monterrey | 2022 |
| • Outstanding Engineering Student Award from Tecnológico de Monterrey | 2020 |
| • Golden Gear Award for best scoring Alumni of Mechanical Engineering | 2019 |
| • Academic Scholarship for Best Candidates from Tecnológico de Monterrey | 2018 |

VOLUNTEERING

FIRST Lego League – Regional Competition Judge

Jan. 2025

Scored teams across FLL rubrics (Core Values, Innovation Project, Robot Design) and delivered improvement feedback.

SACBÉ – Group Mentor and Private Tutor

Jan. 2019 – Jun. 2021

Mentored over 30 middle- and high-school students in a social-entrepreneurship program tackling academic attrition.

Tutored core subjects and guided college prep (study skills, exam prep, applications), helping students plan future pathways.

SOFTWARE SKILLS

Programming: Python, SQL, MATLAB, Arduino, and VBA.

Electronics: LTspice, Altium Designer, and Siemens CHS.

CAD: SolidWorks (certified), Siemens NX, and CREO.

Manufacturing: Tool Handling, 3D Printing, CNC.

CFD: ANSYS, COMSOL, and SolidWorks.

Office: Microsoft Office Skills, Tableau, and Minitab.

Finite Element Analysis: SolidWorks, ANSYS, and CREO.

Language: Spanish (Native), English (C1), German (B1).