

# Julio Cesar Vivas Medina

State of México, México

B.S. in Computer Science and Technology

Tecnológico de Monterrey, Campus Estado de México

Spanish Native Speaker - Advanced proficiency in English

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## Education

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### • B.S. in Computer Science and Technology

*Tecnológico de Monterrey, Campus Estado de México*

*Second-year student (5th semester), 2022-26*

GPA: 3.7 (equivalent to 91/100)

## Additional Education

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### • Oracle One Next Education G5

*Graduate of Oracle Next Education F2 T5 Back-end Program.*

*April 2023 - October 2023*

- Java and Spring Boot 3 training.
- Business Agility training.
- Entrepreneurship Training.
- Soft Skills Training.
- Currently Oracle One Alumni.

### • CBC: Transformar para Trascender

*Certification earned for completing the CBC's Transformar para Trascender program during "Tec Week".*

*April 2024*

- Development of leadership, innovation and teamwork skills.
- Coaching Conscious Business Center.

## Experience

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### • Mobile Software Developer

*For Fundación Todas Brillamos & Toallas Zazil*

*October 2024 - January 2024*

Hybrid

- Developed the first mobile application for Fundación Todas Brillamos using Android Studio with Kotlin and Gradle to support the sales of Toallas ZAZIL.
- Implemented a backend server with a PostgreSQL database and a REST API using Node.js, facilitating secure and efficient data handling.
- Built and deployed the front end with React, integrating a static content server and proxy through Nginx for optimized performance.
- Created an AI chatbot utilizing LLaMA 3.1 to address informational needs and respond to questions about the organization, combating misinformation effectively.
- Containerized and deployed the entire system on a cloud server with Docker and Docker Compose, ensuring scalability and efficient resource management.

### • Software Junior Developer

*At Soltis*

*2022-2024*

Hybrid

- Developed web applications and services, contributing to both front-end and back-end development.
- Installed and configured IT and security equipment, including network systems, security cameras, and other hardware solutions.
- Collaborated with cross-functional teams to troubleshoot and resolve technical issues efficiently.
- Contributed to planning and executing IT projects, optimizing internal processes through innovative solutions.

## Achievements

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- **ICPC México Finalists 2024** November 2024  
*Ranked #88/120 in México Finals and #305/475 in Latin American Regional Contests.*
- **Driver, Programmer, and Team Member of Buluk #3472 FRC Team** 2019 - 2022  
*Valuable Team Member at FIRST Robotics Team from PrepaTec CEM.*
- **Professional Soccer Player** Actuality  
*Professional third division player in Liga TDP, currently for Club Union FC (NUI: 134106).*

## Projects

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- **Graphical Voyage with MATLAB** February 2023 - June 2024  
*Enhanced understanding of physics principles through interactive visual simulations.*
  - Parabolic Shooting Simulator.
  - Bouncing free fall simulator with energy display.
  - One-dimensional harmonic oscillator with energy viewer.
  - Rectangular, trapezoidal, simpson integration viewer.
  - Display of polynomial and trigonometric functions with their respective derivatives.
  - Gram-Schmidt process in three dimensions.
- **Spell checker in C++** August 2023 - December 2023  
*Data Structures & Algorithms class project.*
  - Built a spell checker using C++, checking over 70,000 words in English and throwing suggestions based on typos.
  - Used hash tables to achieve a linear complexity making it able to process up to  $2 \times 10^8$  words per second.
- **BASIC Lexicographic Highlighter** February 2024 - May 2024  
*Lexicographic highlighting for BASIC programs in Clojure.*
  - Implementation of a lexical highlighter for the BASIC language using regular expressions in Clojure.
  - Recognition, syntax validation and categorization of numbers, strings, variables, comments and reserved words in BASIC programs.

## Technical Skills and Interests

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**Main Programming Languages:** C++, Python, MATLAB.

**Secondary Programming Languages:** JavaScript, Clojure, HTML+CSS, SQL, LabView, MicroPython, Wolfram, Java, C#.

**Cloud/Databases:** Firebase, MySQL, PostgreSQL, Digital Ocean, AWS, Docker.

**Tools:** Git, GitHub, Insomnia, VSCode, JetBrains IDEs, Unity Studio.

**IoT Tools:** MQTT, Espressif, Raspberry Pi, ESP32, Arduino.

**Relevant Coursework:** Data Structures & Algorithms, Object Oriented Programming, Software Engineering, IoT, Machine Learning & Data Science, CNNA Networking & Security, Software/Mobile/Game Development.

**Areas of Interest:** Cybersecurity, Networking, Robotics, Quantum Computing, Competitive Programming, Software Development.

**Soft Skills:** Leadership, Problem Solving, Self-learning, Adaptability, Teamwork, Agile Methodologies, SCRUM, Mentorship, Analytical Thinking, Negotiation, Active Listening, Creativity, Attention to Detail, Proactivity, Empathy, Adaptability.