Jafet Daniel HERNANDEZ ROSAS

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Education

UNAM School of Engineering **Aug. 2024 - Expected 2029**
Bachelor of Computer Engineering *Mexico City, Mexico*

Relevant Coursework

- Data Structures and Algorithms I and II
- Linear Algebra
- Automata Theory
- Object Oriented Programming
- Multivariable Calculus
- Differential Equations

Experience

ICPC GPMX 2025 **March 2025 - Present**
International Collegiate Programming Contest *Mexico City, UNAM School of Engineering*

- Faced **advanced algorithmic challenges** in ICPC Gran Premio de México 2025, where I achieved 129th place, and developed problem-solving **resilience and effective collaboration strategies.**

XVII Donald Knuth contest at FES Acatlán UNAM **August 2025**
Organized by ESCOM IPN *Mexico State, FES Acatlán*

- Competitor in the seventeenth edition of the **Donald Knuth Contest** at FES Acatlán, where I achieved **14th place** out of 40, solving **2 problems** during the contest.

First Abraham Macías contest at ESCOM IPN **February 2025**
National Polytechnic Institute *Mexico City, ESCOM IPN*

- Competitor in the 1st edition of the **Abraham Macías Contest** at ESCOM-IPN, where I strengthened teamwork and planning skills for problem solving in a **competitive** situation, achieving **7th place** out of 16, solving **3 problems**.

Academic Coach at CPCFI **June 2025 - Present**
Competitive Programming Club of the School of Engineering *Mexico City, UNAM School of Engineering*

- Mentored a cohort of aspiring competitive programmers in fundamental **algorithms** and **data structures**, leading workshops on problem-solving strategies.

2025 NASA International Space Apps Challenge **October 2025**
Participant & Backend Developer *Ciudad del Carmen, Campeche (Virtual)*

Meteor Atlas

- Developed a Python-based backend using **Flask** to simulate and analyze an asteroid impact.
- Implemented the *NASA Near-Earth Object (NEO) Web Service Application Programming Interface (API)* to serve processed data to a frontend application, enabling a visualization of an impact, while using **Git** for version control.

Projects

2D Animation with Linear Algebra | *C++, OpenGL, VSCode, GitHub* **May 2025**

- Applied **OpenGL** methods to render and transform objects in a sequencial 2D animation system in C++, ensuring precise control of position, orientation, and scaling to integrate concepts from **linear algebra** into computer graphics.
- Implemented mathematical operations such as **transformation matrices, linear transformations, vector spaces, and inner products** to drive animation behavior, reinforcing the academic application of **linear algebra in computer graphics**

D&D-like Game System | *Unity, C#, Visual Studio 2022* **June 2025 - Present**

- Created a **Unity** project for a D&D-like Game System, using only the packages included with the software.
- Designed the system architecture to integrate an **online server** for multiplayer functionality

Webpage to Teach Competitive Programming | *HTML, CSS, VS Code, GitHub* **August 2025 - Present**

Zum's CPCFI Page

- Designed and deployed a static resource website using **HTML/CSS** and **GitHub Pages** to provide curated learning materials and editorials for competitive programming enthusiasts.

Technical Skills

Languages: C/C++, Python, Java, C#
Developer Tools: Git, GitHub, VS Code, Visual Studio, OpenGL
Technologies/Frameworks: Linux, HTML, CSS, LaTeX
Game Engines: Unity, Godot