

Enrique Ayala

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EDUCATION

Monterrey's Institute of Technology and Higher Education

Querétaro, MX

Bachelor of Science in Computer Science, Minor in Cybersecurity

Expected Degree: June 2027

- **Overall GPA:** 96.35/100
- **Relevant Coursework:** Computational thinking for engineering, Object-oriented programming, Implementation of the Internet of Things, Programming fundamental data structures and algorithms
- **Awards:** Academic Talent Scholarship
- **Certifications:** Introduction to Cybersecurity, Specialized Program: Introduction to Cybersecurity and Risk Management, Specialized Program: Mathematics for Machine Learning

EXPERIENCE

Back-End Developer

March 2024 – Present

ceams.co

Querétaro, MX

- Developed and maintained the back-end infrastructure using **Node.js** and **MySQL** to connect the website to a contact form, enabling efficient data collection and storage
- Improved website loading times by optimizing server-side operations and implementing efficient database queries
- Contributed to **SEO optimization**, enhancing search engine visibility and improving overall website traffic
- Collaborated with front-end developers to ensure seamless integration of back-end services with the user interface

2nd Place - NASA Space Apps Challenge Local Event Colón

October 2024

UNAQ Querétaro-NASA

Querétaro, MX

- Developed an unsupervised machine learning model to identify potential "Marsquakes" from InSight Lander data
- Developed a mathematical approach optimizing energy as a function of rotation angle, including data cleansing and non-seismic signal elimination

PROJECTS

Python Password Generator | *Python*

August 2023 – November 2023

- Conducted requirements analysis to identify key features, enhancing password strength protocols and user security
- Developed functions to generate passwords based on user-end criteria
- Developed a function to generate and evaluate prime numbers, called $6k \pm 1$ prime test
- Wrote efficient and reusable code for generating passwords with various criteria, including length, use of uppercase letters, special characters, digits, and prime number

Restaurant Management System | *C++, Object-Oriented Programming*

November 2023 – December 2023

- Developed a restaurant management system with an admin panel to add, remove, and modify orders for multiple tables
- Designed a modular system using object-oriented principles, ensuring scalability and maintenance
- Designed and implemented a secure authentication system for admin, and worker access, safeguarding sensitive operations
- Conducted rigorous testing and debugging to ensure the system handled edge cases and potential issues

Phishing Website Classifier | *Python, Jupyter Notebooks, TensorFlow, Pandas, Scikit-learn*

August 2024 – Present

- Merged multiple datasets into one cohesive dataset, ensuring consistency and accuracy for machine learning model input
- Conducted data preprocessing and cleaning in **Pandas** to ensure high-quality inputs for model training
- Implemented feature extraction based on research-defined criteria to identify patterns indicative of phishing
- Developed machine learning models in **TensorFlow**, focusing on classification tasks to improve phishing detection accuracy

TECHNICAL SKILLS

Languages: Python (Proeficient), C/C++ (Proeficient), MySQL (Intermediate), JavaScript (Intermediate), HTML/CSS (Proeficient), R (Proeficient), Matlab (Proeficient)

Frameworks: React, Node.js, TensorFlow, Scikit-learn, WordPress, Bootstrap

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm

Libraries: pandas, NumPy, Matplotlib, TLD, urllib