Enrique Ayala

hello@enayala.me | linkedin.com/in/enayala | github.com/KIKW12 | enayala.me

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, Data Structures and Algorithms, Implementation of Computational Methods, Software Construction and Decision Making, Modeling of Multi-Agent Systems with Computer Graphics
- **Awards:** Academic Talent Scholarship
- **Certifications:** Introduction to Cybersecurity, Specialized Program: Introduction to Cybersecurity and Risk Management, Specialized Program: Mathematics for Machine Learning

Professional Experience

Full-Stack Developer March 2024 – May 2025

CEAMS Digital Solutions *Querétaro, MX*

- Architected and deployed robust back-end infrastructure using **Node.js** and **MySQL**, successfully handling 500+ daily form submissions with 99.9% uptime
- Optimized database queries and server-side operations, achieving **40% reduction** in page load times and significantly improving user experience
- Spearheaded **SEO optimization** initiatives, resulting in **25% increase** in organic traffic and improved search engine rankings
- Collaborated cross-functionally with front-end team to deliver seamless API integrations, ensuring consistent data flow and enhanced user interface responsiveness

Projects

Via Alta - Academic Enrollment Management System | *Next.js, PostgreSQL* February 2025 – May 2025

- Developed comprehensive enrollment and schedule management system using **Next.js 15**, **React 19**, and **TypeScript**
- Implemented automated course registration with prerequisite validation, reducing manual processing time by 80%
- Built genetic algorithm for schedule generation with conflict resolution for professors, classrooms, and student schedules
- Designed **PostgreSQL** database with 10+ tables and RESTful API, deployed on **Heroku** with CI/CD pipeline
- Integrated multi-role authentication system supporting students, coordinators, and administrative staff

2nd Place - NASA Space Apps Challenge | *Python, TensorFlow* October 2024

- 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

Phishing Website Classifier | *Python, TensorFlow, Pandas, Scikit-learn* August 2024 – September 2024

- Merged multiple datasets ensuring consistency and accuracy for machine learning model training
- Implemented feature extraction and developed **TensorFlow** classification models to improve phishing detection accuracy

Python Password Generator | *Python, Threading* August 2023 – November 2023

- Developed secure password generation functions with customizable criteria including length, character types, and prime numbers
- Implemented 6k±1 prime test algorithm for enhanced security features

Technical Skills

Languages: Python (Proficient), C/C++ (Proficient), JavaScript (Intermediate), TypeScript (Intermediate), MySQL (Intermediate), HTML/CSS (Proficient), R (Proficient), Matlab (Proficient)
Frameworks: React, Next.js, Node.js, TensorFlow, Scikit-learn, WordPress, Bootstrap
Developer Tools: Git, Docker, Google Cloud Platform, Heroku, VS Code, Visual Studio, PyCharm, GraphQL, Prisma
Libraries: pandas, NumPy, Matplotlib, TLD, urllib, Jest, Threading, OpenMP