

EMILIA MACARENA ARRIAGA RODRÍGUEZ

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Github · LinkedIn · Portfolio

EDUCATION

National Autonomous University of Mexico (UNAM)

Bachelor of Engineering in Computer Engineering

Relevant Coursework: Data Structures, Algorithms, Cybersecurity, Operating Systems, Databases.

Expected June 2027

Mexico City, Mexico

TECHNICAL SKILLS

- **Programming:** Python (Pandas, NumPy, Matplotlib), Java, C, SQL (Complex Queries).
- **Cybersecurity Tools:** Burp Suite, Wireshark, Nmap, SQLmap, Metasploit.
- **Operating Systems:** Kali Linux, Ubuntu, macOS.
- **Languages:** Spanish (Native), English (Advanced - TOEFL iBT: 92), Swedish (Beginner).

PROFESSIONAL EXPERIENCE

Puma Hat Cyber Security Team

Instructor

Jan 2024 – Present

Mexico City, Mexico

- Mentoring and instructing students in core cybersecurity concepts to develop future professionals.
- Active competitor in Capture The Flag (CTF) events, specializing in ethical hacking and vulnerability analysis.
- Designing and implementing simulated cyber-attack scenarios to train team members in defensive strategies.

CED UNAM (Center for Sports Education)

Pentester

Jan 2025 – June 2025

Mexico City, Mexico

- Executed comprehensive penetration tests within Red Hat-based environments to systematically identify security vulnerabilities.
- Employed ethical hacking methodologies to assess and strengthen the security posture of the academic unit's technological infrastructure.

PROJECTS

Machine Learning Model for Fraud Detection

Python, Scikit-learn

- Built a fraud detection pipeline for anomaly detection and supervised classification of suspicious financial transactions.
- Developed and deployed a complete ML workflow, from data cleaning and feature engineering to model training and evaluation.

Masked Language Model for Plank Exercise Correction

Python, NLP

- Developed a Masked Language Model (MLM) to guide users in performing plank exercises utilizing camera-based detection.
- Optimized model accuracy by implementing a vectorizer for precise body detection and generated a custom dataset for training.

Hackathon SPEI BANXICO 2025

Team Lead

- Engineered a conceptual solution for bank transactions using APIs, leading a cross-functional team through the development process.
- Managed all communication and logistics with organizers and recruited an external manager to optimize project delivery.

Z80 Processor Emulator

Java

- Engineered a functional Z80 processor emulator, implementing core features such as memory management and instruction execution cycles.

LEADERSHIP & AWARDS

- **Hackmex 8th Edition Finalist (2025):** Led a team to the grand finale, achieving 7th place nationwide.