CARLOS ELÍAS RIVERA MERCADO

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EDUCATION

Instituto Tecnológico Autónomo de México, ITAM.
Majoring in Data Science - sixth semester.
Accumulative grade: 9.77

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EXPERIENCE

In school experience

- *Advanced data structures teaching (Both semesters 2023) :* Led classes as a teaching assistant covering topics like Binary Search Trees, AVL Tree, Bloom Filters, and related topics.

- *Undergraduate teaching assistant (spring 2023):* Tutored students in macroeconomics theory.

- *Academic Excellence Award for the Highest Grade (spring 2023):* Obtained the acknowledgement of getting the best grade of the data science major.

- *Exchange Student (spring 2024):* Went abroad on an exchange student experience in Aalto University School of Science, where I took courses regarding topics like Machine Learning, Natural Language Processing, Statistical Inference, and Computational Geometry.

Working experience

- *Deep Dive (October 2023 - Present) :*

  - *Infrastructure as code:* Worked on developing a solution to the deployment of applications on AWS cloud. This solution allows my coworkers to have a CI/CD in their projects and use infrastructure as code tools.

  - *Diver tracker:* Constructed an application, API, and database for a mental health survey. We successfully developed an application that helps assess and understand the mental health status of the entire Deep Dive team. This solution provides an additional parameter for decision-making by incorporating the team's mental well-being.

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PROJECTS

- *Crime in AO & BJ (September 2023 - Present):* Have been co-leading a team in developing a solution for crime in Mexico City. The goal of the project consists on providing information and data about recent crimes in different regions within the city for decision making. We have achieved a deployment of a demo of one of the applications we want to develop and are currently working on getting our products and services to non governmental organizations.

- *Mexican Cinema (spring 2023):* Developed an application that recommends Mexican films based on users' selection of genre, ratings, and a set of feelings. Motion picture, ratings, and genres were derived by using API calls and web scraping of TMDB, IMDb, and MUBI. Feelings were matched with emotions detected in the movie synopsis by using EmoRoBERTa, a machine learning model.

- *NimGame AI:* Implemented a functioning AI that can be unbeatable at the nim game in n levels, using minimax tree and backtracking theory.

- *Cryptography and web scraping*: Built a web scraping bot using Beautiful Soup in Python and encoded the information using Vigenere Cypher.

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SKILLS

Technical Skills:

- Python (Pandas, Joblib, Numpy, Scrapy, Selenium, etc.), Java, Docker, Terraform, R, Git & Github, SQL, Bash (zsh), AWS (ECS, ECR, S3, EC2, AWS CLI).

Soft Skills:

- Starting player of the official basketball team at my university which has allowed personal and team growth (August 2021 - Present).

Language Skills:

- Spanish (Native Language), English Cambridge Certificate (B2).