

Juan Antonio Casas Martínez

jcasasm85@gmail.com | +52 5580354406

[github](#) | [linkedin](#)

PROFILE

Data Scientist

Applied Mathematics and Data Science student. Passionate about solving complex mathematical and programming challenges and coming up with creative solutions that lead to continuous learning and the discovery of new technological tools.

EDUCATION

Bachelor of Science - Data Science

Jun 2022 - May 2027

Instituto Tecnológico Autónomo de México

Mexico City

- Recipient of 75% scholarship for academic excellence.
- Relevant coursework: Advanced Data Structures, Computer Application Development, Databases, Datasources

Bachelor of Science - Applied Mathematics

Jun 2022 - May 2027

Instituto Tecnológico Autónomo de México

Mexico City

- Recipient of 75% scholarship for academic excellence.
- Relevant coursework: Differential equations I, Linear Algebra I and II, Probability I and II and Real Analysis

EXPERIENCE

deep.dive

October 2023 - Present

Intern

Mexico City

- Created scraper bots using OOP, Selenium and BeautifulSoup python packages to extract data from TikTok and Instagram. Designed a Streamlit dashboard to display the insights, performed sentiment analysis with LLMs and uploaded outputs to AWS S3 and PostgreSQL database.
- Developed a Streamlit app aimed at optimizing prompt engineering performance through different techniques including Chain of Thought (Cot) for structured multi-step reasoning. Integrated the OpenAI API and some insights from an LLM paper.
- Implemented an automated web scraping system on a AWS EC2 instance and contributed to deploying scrapers using AWS Lambda to extract data from Mexican government websites. The solution includes Google extension management, user authentication, and CAPTCHA bypass techniques.
- Extracted meteorological data using the NASA POWER API and energy data from the ERCOT API. Created AWS Lambda functions to speed up data extraction, which is used to forecast energy prices for the Texas market (ERCOT) with an LSTM model.

NOTABLE PROJECTS

Inventory Management Program

September 2021 - February 2022

Consultant

Mexico City

- Developed a graphical user interface connected to MySQL and using OOP in Java. It's purpose was to access and modify a firm's inventory.
- Implemented a relational database to store and structure data using MySQL.

MetroFlow Dashboard

October 2024 - Present

Developer

Mexico City

- Developed an automated web scraping solution using Selenium to extract hourly traffic data for Line 3 of the subway, which is displayed on a Streamlit.
- Integrated AWS Lambda to run the pipeline daily, ensuring up-to-date data on metro traffic trends.

SKILLS

Programming Languages Java | Python | C# | SQL | HTML | R |

Technologies AWS Lambda, S3 Bucket, EC2, ECR, SNS, DynamoDB | Docker | OpenAI | Elasticsearch |