Santiago Velasco García

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PROFILE

Dedicated and proactive Computer Engineering student in the 7th semester, eager to apply academic and non-academic knowledge in real-world scenarios. Strong problem-solving skills, ability to manage multiple tasks with a positive attitude, and thrive under pressure. Demonstrated leadership skills through team projects and collaborative environments. Seeking an internship opportunity to contribute to team success while gaining hands-on experience.

EDUCATION

NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO | FACULTY OF ENGINEERING | COMPUTER ENGINEERING | EXPECTED JULY, 2027

Academic Performance in Relevant Courses

Data Structures and Algorithms - 10/10
Object-Oriented Programming - 10/10
Software Engineering - 10/10
Relational Databases – 10/10

EXPERIENCE

ROCKETS DIGITAL BRAND | INTERN IN IT | JANUARY 2022 – JANUARY 2023

- Assisted in troubleshooting and resolving hardware and software issues for company employees.
- Supported the deployment and maintenance of internal applications.
- Collaborated with senior developers on automation scripts and IT infrastructure improvements.
- Provided technical support and documentation for internal IT processes.

PROJECTS

MUSIC POPULARITY ANALYSIS USING SPOTIFY API: STATISTICAL EVALUATION AND DATA VISUALIZATION | MARCH 2025 *(MOST RELEVANT PROJECT)*

- Data Collection & API Integration: Utilized the Spotify API via Spotipy to retrieve track-level data from Bad Bunny's discography, including popularity scores and release dates. Cleaned and merged datasets from multiple sources.
- Statistical Insight: Applied Pearson correlation and paired t-tests to evaluate the relationship between reggaeton classification and song popularity, testing the hypothesis that reggaeton tracks are generally more popular.
- Data Visualization & Interpretation: Generated histograms, KDE plots, and album-level grouped summaries using Matplotlib and Seaborn to illustrate trends in popularity across genres and time.

RELATIONAL DATABASE DESING FOR MANAGING GAS STATION COMPANIES | MAY 2025

- Database Modeling: Developed a relational database from initial business requirements using E-R modeling, normalization, and physical schema design.
- SQL Implementation: Implemented complex SQL queries, stored procedures, and triggers to support core operations such as inventory tracking and employee management.
- Academic Simulation: Executed as a comprehensive academic project in a collaborative environment, simulating real-world enterprise-level database management systems through teamwork and shared development responsibilities.

SPORTS TEAM PERFORMANCE & CITY POPULATION CORRELATION ANALYSIS | APRIL 2025

- Statistical Evaluation: Conducted an analysis to examine the correlation between metropolitan populations and the win/loss performance of professional sports teams in the four major U.S. leagues (NFL, NBA, MLB, NHL) for the 2018 season.
- Data Preparation: Cleaned and merged datasets from multiple sources to ensure consistency and accuracy.
- Metric Aggregation & Correlation: Aggregated team performance metrics by city and computed Pearson correlation coefficients to assess the relationship between population size and team success.

HISTOGRAM EQUALIZATION IN IMAGES | DECEMBER 2023

- Parallelized Image Processing: Implemented OpenMP to accelerate histogram equalization by identifying parallelizable tasks, such as histogram generation and cumulative distribution function (CDF) computation.
- File Handling & Automation: Developed functions to process images dynamically, ensuring consistent naming conventions for output files and generating CSV reports for histogram analysis.
- Robust Error Handling: Implemented checks to validate input files, preventing crashes due to incorrect image paths or unsupported formats.

MESSAGING APPLICATION USING JAVA SOCKETS | DECEMBER 2023

- Client-Server Architecture: Implemented a TCP-based communication system with a multithreaded server to handle multiple clients simultaneously.
- Real-Time Messaging: Designed a user-friendly console-based interface to send and receive messages in real-time, ensuring low-latency communication.
- Threading & Concurrency: Utilized Java multithreading to manage multiple connections efficiently without blocking execution.

SKILLS

LANGUAGES **SPANISH** *NATIVE SPEAKER* **| ENGLISH** *HIGHLY PROFICIENT*

PROGRAMMING LANGUAGES C **|** PYTHON **|** SQL

OTHER RELEVANT TOOLS MATLAB | JUPYTER NOTEBOOK |GIT

CERTIFICATES

INTRODUCTION TO SYMBOLIC MATH WITH MATLAB | MATHWORKS

MATLAB ONRAMP | MATHWORKS

INTRODUCTION TO DATA SCIENCE IN PYTHON | UNIVERSITY OF MICHIGAN | COURSERA