

Juan José Aguado

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EDUCATION

Pontificia Universidad Javeriana

Systems and Computer Engineering (Computer Science)

Cali, VA

Aug. 2018 – Jun. 2025

Pontificia Universidad Javeriana

Master in Data Science

Cali, VA

Jan. 2024 – Jun. 2026

EXPERIENCE

Database Administrator

Fundación Casa de Colombia

Jan. 2024 – Jun. 2024

Cali, VA

- Spearheaded the design, creation, and deployment of a comprehensive database for a software solution aimed at streamlining operations at Casa de Colombia.
- Developed and maintained PostgreSQL databases to efficiently manage and store crucial information, supporting the provision of essential health and education services to children.
- Utilized Jira for project management and issue tracking, ensuring efficient workflow and task management.
- Employed Git and Bitbucket for version control and collaborative development, maintaining a robust and organized codebase.

PROJECTS

UVa Programming Problems | *Python*

January 2023 – June 2023

- Solved numerous programming problems from the UVa Online Judge, a platform hosted by the University of Valladolid with over 4300 problems.
- Utilized various data structures such as arrays, linked lists, trees, queues, and graphs to optimize solutions.
- Implemented algorithms including bisection, binary search, backtracking, dynamic programming, and greedy algorithms to solve complex problems.
- Gained deep understanding of problem-solving techniques and algorithm optimization through continuous practice and refinement of solutions.

Statistical Analysis and Data Science Projects | *R, Markdown*

January 2024

- Conducted comprehensive analysis of the real estate market in Cali, Colombia, using data from B&C real estate agency, focusing on property prices, locations, features, and sales.
- Preprocessed and cleaned real estate data, analyzed descriptive statistics, and created visualizations to communicate findings effectively.
- Performed various statistical simulations, including Monte Carlo Simulation to estimate the value of π , and analyzed bias, efficiency, and consistency of different estimators.
- Verified the Central Limit Theorem through simulations, observed its implications on sample distributions, and constructed confidence intervals using bootstrap methods.
- Built multiple linear regression models to predict real estate prices based on the area, validated model assumptions, performed hypothesis testing, and compared models to find the best fit.
- Developed a deep understanding of statistical analysis and data science techniques using R, enhancing skills in data manipulation, visualization, and modeling.

COURSES

HarvardX CS50 | *Django, HTML, Git, CSS, Javascript, SQL*

April 2024

- Developed a full-stack web application using Django, implementing both the backend with RESTful APIs and the frontend with HTML, CSS, and JavaScript.
- Utilized Git and GitHub for version control and collaboration, ensuring efficient project management and code integrity.
- Implemented interactive features and dynamic content using JavaScript for seamless user experience.
- Designed and managed relational databases with SQL, ensuring data integrity and efficient query handling.
- Applied best practices in web security, testing, and deployment, ensuring robust and reliable applications.

SKILLS

Programming languages: Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R

Frameworks: Django

Developer Tools: Git, Docker, VS Code, pgAdmin, Jira, Bitbucket, RStudio, VirtualBox, Google Colab

Libraries: pandas, NumPy, Matplotlib, SciKitLearn

Languages: spanish (native), english (advanced)