

MIGUEL ANGEL BRAVO MARTINEZ DEL VALLE

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SUMMARY

Data Analyst specialized in data visualization, automation, and pipelines. Skilled in Python, R, SQL, Tableau and React to transform complex datasets into clear insights. Experienced with large-scale data such as NOAA databases. Strong problem-solving, communication, and collaboration skills. Personal projects and results are showcased on my website. Additionally, I have hands-on experience in full-stack development using FastAPI, Docker, and Raspberry Pi, and have built interactive dashboards with Deck.gl for climate data.

EDUCATION

San Diego State University , <i>College of Arts and Letters</i> , San Diego, California	August 2023 - May 2025
Master's Program in Big Data Analytics	GPA: 3.94/4
Miami University , <i>College of Engineering and Computing</i> , Oxford, Ohio	August 2022 - May 2023
Exchange Year Program in Electronics, Robotics and Mechatronics Engineering	GPA: 3.84/4
University of Málaga , <i>Málaga</i> , Spain	September 2018 - May 2023
Degree in Electronics, Robotics and Mechatronics Engineering	GPA: 7.8/10

PROFESSIONAL EXPERIENCE

iHeatApp - SDSU Climate Informatics Lab , San Diego State University, CA	June 2024 - November 2025
Junior Software Engineer	

- Designed and implemented a full-stack web application (*iHeatApp*) for real-time WBGT forecasts, integrating a Python/FastAPI backend with a React + Deck.gl frontend.
- Built scalable pipelines for NOAA WBGT data, delivering hourly high-resolution forecasts.
- Led the project as first author of a peer-reviewed publication in *Agricultural and Forest Meteorology*.
- Deployed the system with Docker, ensuring responsive bilingual access for both desktop and mobile devices.

CodeGPT - AI4Business , San Diego State University, CA	January 2024 - May 2024
Graduate Research Assistant	

- Conducted a literature review on the latest pre-training techniques for programming and natural languages, union the integration of models like CodeBERT, GraphCodeBERT, and UniXCoder into the Code Search project.
- Enhanced code search performance by applying advanced techniques from Large Language Models (LLMs) and continually incorporating new findings to improve encoding efficiency and semantic understanding.

Center for Information Convergence and Strategy , San Diego State University, CA	August 2023 - May 2024
Graduate Research Assistant	

- Analyzed spatio-temporal data from agricultural watersheds using the Tri-Space approach to study nutrient dynamics and eutrophication from the Agricultural Catchments Programme dataset in Ireland.
- Conducted multivariate and multitemporal analyzes, focusing on chemical parameter correlations, while ensuring data integrity and reliability through advanced cleaning and processing techniques in R.

HorstSort II - Smart Campus , University of Málaga, Spain	March 2022 - June 2022
Engineering Intern	

- Led the integration of IoT technology into the Science Teaching Garden for real-time monitoring of environmental parameters (temperature, humidity, and light). Developed and executed a wireless sensor system using ESP8266 and set up remote control via MQTT and NodeRed, with Telegram as a user interface for remote updates and control.
- Authored and defended a research paper summarizing project objectives, observations, methods, and conclusions. Successfully presented the thesis to the examination board as part of my degree in Electronics, Robotics, and Mechatronics Engineering.

AWARDS & INVOLVEMENT

Western Users of SAS and Open-Source Software Conference Scholarship	September 2024
Received the Student Scholarship and presented my Machine Learning project, <i>Flight Delay Analysis and Prediction</i>	

International Student Exchange Program Scholarship , ISEP Organization	August 2022 - May 2023
Highly competitive merit-based scholarship covering housing, tuition, and meals, along with a monthly stipend, enabling a year-long exchange at Miami University	

Honorary Scholarship , <i>Sagrado Corazon de Jesus</i>	June 2018
Prestigious academic distinction awarded to top-performing students for exceptional high school achievements	

SKILLS

Software Development: Python, JavaScript (React), SQL, R, FastAPI, Docker

Data Science: Machine Learning (Regression, Trees, Boosting, Neural Nets), Statistical Analysis, Time-series Forecasting

Data Visualization & Mapping: Deck.gl, WebGIS/Mapbox, Tableau, Interactive Dashboards, Responsive UI Design