Facundo Branbate

Phone Number: (+598) 95605166   **Mail:** fabran99@gmail.com
Web: https://fabran99.github.io/

Profile

I'm a Software Developer from Uruguay, mainly focusing on backend development using Python for **data science** tasks and **automations**.
I've worked a lot with **geospatial and time-series data**, finding important patterns and insights. I also work with Machine Learning, **building datasets, training AI models and** creating complex systems based on data.
On top of that, I have experience in frontend development using **ReactJS**, which helps me to build **complete software solutions from start to finish.**

Work Experience

03/2019 — 01/2020
Montevideo, Uruguay

Full stack developer
Spymovil

The company is specialized in collecting and interpreting data through sensors installed in pipelines, power stations, water tanks, and more, I had the opportunity to work with notable clients including OSE, UTE, and several other state enterprises.

My primary responsibilities encompassed:
- Frontend and Backend Development: Utilizing ReactJS for frontend development and Python, Django, and Pandas for backend development, I created robust software solutions that ensured **seamless data processing and interpretation**.
- API Creation: I engineered APIs that streamlined the availability of sensor data and **statistical insights**, significantly enhancing the accessibility and applicability of the data we collected.
- Web Interface Design: To complement the above, I designed intuitive web interfaces that facilitated smooth user interactions and data interpretation, leading to a seamless user experience.

01/2020 — 11/2022
Montevideo, Uruguay

Backend Developer/Data Scientist
Smartway

The company is dedicated to collecting information through GPS and sensors installed in diverse vehicles - from truck fleets to combine harvesters and construction machinery.
As a data scientist, I have played an integral role in executing several projects for **both transport companies and agricultural producers.**

You can find a detailed account of some of the features I worked on my personal website: https://fabran99.github.io/portfolio-work-2/

My core responsibilities encompass the following:
- **Backend Development**: Leveraging Python, Django, Pandas, PostgreSQL, GeoPandas, MongoDB, and Redis to provide robust backend solutions.
- **Data Analysis and Geospatial Data Handling**: Conducting comprehensive data analysis, with a special focus on geospatial data management for effective vehicle tracking.
- **Statistics & Indicators**: Calculating key statistical data and indicators related to truck fleets and agricultural machinery.
- **API & Algorithm Development**: Designing and creating APIs and complex algorithms for various projects.
- **Machine Learning and Datalakes**: Building machine learning models to solve

Work Experience

diverse problems and creating datalakes to manage extensive datasets.

11/2022 — presente
Montevideo, Uruguay

Freelance Data scientist
Smartway

I provide support to the software development team in a variety of tasks related to data science and backend development.

Currently, I am collaborating on a **research project** between Smartway, INIA (National Institute of Agricultural Research), and ORT University, **developing artificial intelligence models** for predictions related to the agricultural sector.

11/2022 — presente
Montevideo, Uruguay

Software engineer
Marco Fintech

I work as a software engineer in a Fintech startup that aims to facilitate access to financing for SMEs in Latin America. My main tool is Python, which I use to develop solutions for both clients and internal users.
Some of the projects I have been involved in include:

- Implementing **Slack Bot workflows** to automate internal communication and documentation delivery.
- Integrating with Mexico's Tax Administration Service (SAT), enabling the creation of **automated credit histories** and various analytics based on clients' invoice data.
- **Integrating with Salesforce**, streamlining the flow of information between the web platform and the company's internal Salesforce system.
- **Automating due diligence** based on clients' credit/legal information **using GPT API** to identify red flags in the available information, saving hours of manual work for the company's legal department.

Education

2013 — 2016
Montevideo, Uruguay

High School (economics orientation)
Liceo Bauzá

2017 — 2017
Montevideo, Uruguay

IT Support course
Bios

General course of maintenance and repair of pc and networks.

2018 — 2019
Montevideo, Uruguay

Web programming course
Bios

General course of web technologies, PHP, JavaScript, MySQL, HTML y CSS.

2022 — present

Studying Systems Engineering
ORT University

Started the Systems Engineering degree at ORT.

Portfolio

Data analysis app for agriculture
https://fabran99.github.io/portfolio-work-2/
This is an **agricultural application** that collects and analyzes data from combine harvester machines. It uses GPS location, performance, and humidity sensors to **generate practical statistics.**
The app, developed using Python, Django, Pandas, MongoDB, and Redis, also employs Machine Learning to give extra insights, even saving money on sensors. The use of task queues ensures system efficiency. Overall, it's a tool that combines technology with agriculture for improved farming practices.

Portfolio

Real time assistant for League of Legends
https://fabran99.github.io/portfolio-work-1/
This is a **desktop application**, designed using ReactJS and Python, that delivers real-time recommendations by analyzing statistics from **thousands of players**. The link below the title provides a comprehensive explanation of the application's functionalities, the technologies employed, and the architecture leveraged. It's an **innovative tool** that blends extensive data with immediate processing capabilities to generate valuable insights.

Automatic generation of ranch polygons
https://fabran99.github.io/portfolio-work-3/
This feature automatically **generates ranch polygons based on the tracked movement of sowing machines**, employing Machine Learning for precision. It swiftly **creates a polygon that mirrors the field layout immediately post-planting**, utilizing the GPS data captured from the planters.
It's an efficient tool that marries cutting-edge technology with agricultural practices for field mapping.

Articles

Algorithms for agriculture
https://fabran99.github.io/agro-algorithms/
I've developed a range of **algorithms specifically designed for agricultural machinery**. These have been crafted using Python, Pandas, and **Machine Learning techniques**, showcasing an application of advanced technology in the agro sector.

Character detection in images with Machine Learning
https://fabran99.github.io/lol-champ-minimap-detection-part-1/
An experimental project harnessing the power of Machine Learning to identify characters from the League of Legends game on the minimap using screenshots.
The project comprises two stages: the initial phase of **generating a dataset** and a subsequent phase dedicated to **training the Machine Learning model**. It's an intriguing exploration of AI's potential in **enhancing gaming experiences.**

League of Legends Assistant Backend Architecture
https://fabran99.github.io/arquitecture-lol-app/
This post talks about the **backend setup** I created for a League of Legends assistant. It explains what kind of information is used and how different server processes keep the **statistics fresh**. A look into the work that goes into supporting this gaming tool.

Related knowledge

- Git, GitHub, GitFlow.
- Scrum.
- Arduino.
- 3d Printing.

Hobbies

3d printing   VoleyBall   Videogames