RODOLFO FERRO

AI + DATA + BLOCKCHAIN DEVELOPER

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ABOUT ME

I am a statistical methods specialist with a strong focus on data driven solutions. My background spans roles developing tech solutions with data, blockchain, AI/ML/DL, open data, and innovation across academia, industry, and civic projects. I am passionate about developing intelligent solutions that leverage data and emerging technologies to create a positive impact on society.

EDUCATION

2024 - 2025 | STATISTICAL METHODS SPECIALIST

Centro de Investigación en Matemáticas (CIMAT), A.C.

2021 - 2023 | COMPUTER SYSTEMS ENGINEER

Universidad Virtual del Estado de Guanajuato (UVEG)

2011 - 2017 | BACHELOR IN MATHEMATICS

Universidad de Guanajuato

SKILLS

PROGRAMMING

Python • R • Processing • C/C++ • MongoDB • Solidity • LaTeX

LIBS/FRAMEWORKS

NumPy • Plotly • TensorFlow • Pandas • Flask • FastAPI • OpenCV • Airflow • Prefect Streamlit • Dash • Networkx

TOOLS/ENVS/CLOUDS

Git • GitHub • JupyterLab • Marimo • Google Colab • Azure ML • SageMaker • Vertex Google Cloud Platform (GCP) Microsoft Azure • Amazon Web Services (AWS)

SOFTSKILLS

Leadership • Communication • Collaboration • Problem-Solving • Adaptability Critical Thinking • Creativity • Empathy • Time Management • Public Speaking

AWARDS & CERTIFICATIONS

- Microsoft Certified: Azure Fundamentals [AZ-900] (2021).
- Winner of the #TFWorld TensorFlow 2.0 Challenge (2020).
- Quantum Computing 101 [Mexico Bootcamp] Badge by IBM Q (2018).
- 1st place in the IBM Hackapalooza Bluehack Hackathon (2017).
- 1st place in Hackathon "Centro Fox" (2017).

PROJECTS

RESMONET

Detecting Emotional States from Video to Improve the Electronic Patient Record (http://dx.doi.org/10.2139/ssrn.4120087).

PSYCHOPATHOLOGY ASSISTANT

An intelligent assistant platform to track psychopathology patients responses during face-to-face and remote sessions (TensorFlow 2.0 Challenge Winner)

CITIZENBOT

A social network bot to attend citizenship reports about failures on public services. Intellectual property registration N°: 03-2017-071811472900-01 (Mexico).

EXPERIENCE

2023 - PRESENT | SR. SWE (DATA ENGINEER) @ BISONIC MÉXICO

- Automated processes for in-platform transactions with Python and FastAPI for web services (APIs) deployed in AWS.
- Built analytics dashboards for strategic decisions using Streamlit and Dash.
- Built an machine learning based tool to identify non-legitimate users in platform using Python and standard tools for ML & Data Science (Pandas, sklearn, etc.).
- Implemented and deployed smart contracts in Ronin, Ethereum and Arbitrum for inplatform NFT token usage and payments, using primarily Python, Solidity and Hardhat.

2022 - 2023 | DEVELOPER ADVOCATE @ PLOOMBER

- Shared in person and online events about company's products and solutions.
- Built documentation, examples and community using primarily Python and Ploomber.

2020 - 2021 | ARTIFICIAL INTELLIGENCE DIGITAL SHERPA @ MICROSOFT MÉXICO

- In charge of 2000+ community groups for certification processes in Azure cloud solutions.
- Built documentation, examples and community using primarily Python, Azure ML, and Cognitive Services.

2020 - 2022 | SR. MACHINE LEARNING ENGINEER @ VINDOO.AI

- Designed and deployed computer vision models in Google Cloud Platform.
- Developed computer vision solutions for company's product primarily with Python, OpenCV and TensorFlow. This includes an implementation of object detection models and deepsort for object tracking in video.
- In charge of model registry in GCP and orchestration system using Airflow.
- Built an interactive statistic system for strategic business decision making using Python and Streamlit.

2020 - 2022 | SR. MACHINE LEARNING CONSULTANT @ HCT MÉXICO

- Served primarily as an occasional consultant.
- Co-designed product architecture and interactions between a computer vision smart solution and data using Python and an orchestration system.
- Developed and maintained the ML system for product services using TensorFlow and Streamlit.
- Developed and maintained monitoring system for real-time product status using a Telegram Bot and Streamlit.

2019 | LEAD MACHINE LEARNING ENGINEER @ OMDENA

- Served as a machine learning developer in the fire outbursts prevention challenge using Python, OpenCV, TensorFlow and the standard stack for data (numpy, pandas, etc.).
- Lead the image enhancement task for the challenge.
- Worked in the model implementation of UNet based solution developed during the challenge.
- Selected as a community builder at Omdena due to exemplary performance in their Al challenge on the tree identification challenge to prevent fire outbursts.

2018 - 2019 | OPEN DATA COORDINATOR @ LAB LEÓN, GOVERNMENT OF LEÓN

- Coordinated the implementation of tech prototypes for the city, designing, structuring and analyzing the impact.
- Improved the technical system for Open Data processes along different city departments.

2017 | MACHINE LEARNING RESEARCH INTERN @ HARVARD

- Implemented machine learning models for inference of molecule properties using Python with TensorFlow and Gaussian Processes in the Department of Chemistry and Chemical Biology.
- Developed a Python package on ML models applied to molecular properties, using GPFlow.