

MARTÍN ARAMAYO

Autonomous City of Buenos Aires, Buenos Aires, Argentina



----- m-g-aramayo MartinAramayo

My blogs: in English blog/Martin, in Spanish blog/Martin/es, (each of the links offers different content).

Completed education

Instituto Balseiro

Master of Science in Statistical Physics: Machine learning applied to demography

Jan. 2020 – Dec. 2021

Bariloche, Río Negro

Instituto Balseiro

Bachelor degree in Physics

Jul. 2018 – Dec. 2020

Bariloche, Río Negro

Universidad Nacional de Salta

Bachelor degree in Physics

Jan. 2016 – Jul. 2018

Ciudad de Salta, Salta

Experience

UNICEF, ONG

Data Scientist trainee

Jun. 2020 – Feb. 2022 (1 year 9 months)

San Carlos de Bariloche, Río Negro

- Analysis of GIS data and microcensus data for a demographical estimation project.
- Binary classification of occupation state with machine learning.
- Technologies: Scikit-learn, Numpy, Pandas, SPSS datasets, Scipy, SQL.

CNEA, Centro Atómico de Bariloche

Machine learning trainee — Scholarship Holder — M. Sc. in statistical Physics

Jan. 2021 – Jan. 2022 (1 year 1 month)

San Carlos de Bariloche, Río Negro

- Ground-up implementation of agent-based demographic simulation with 300.000+ agents. Data pipeline includes: automatic config files and log files, post-execution analysis, testing and benchmarking.
- Mathematical modelling courses: dynamical systems, stochastic models, game theory, technology and healthcare oriented models.
- AI: Machine Learning, Deep Learning, LSTM, NLP, image processing, encoding, feature engineering and clustering.
- Data handling: Preprocessing field data, simulation data production and analysis, data mining from multiple runs.
- Software development: Python for data analysis. Computational experience in physics, biology and healthcare projects. CUDA oriented to simulations. Basic data structures in C; trees, stacks, list.
- Courses on Medical imaging: Use of OpenCV, ImageJ, Matlab and Python.

CNEA, Centro Atómico de Bariloche

Data analysis trainee — Scholarship Holder — B. Sc. in Physics

Jul. 2018 – Jan. 2021 (2 years 7 months)

San Carlos de Bariloche, Río Negro

- Data-driven projects requiring statistical background.
- Instances of public speaking involving the communication of experimental results and technical knowledge acquired.

Projects

Demographic agent based simulation | Python, Bash, Pandas, Matplotlib

April 2021

- Developing a MVP OOP prototype in Python, including growth and reproduction dynamics.
- Final implementation in the Pandas library which reduced in half execution times.
- Reproduction of some popular models in population dynamics.
- Public presentations of results and visualizations.

Demographic estimation | Sklearn, Keras, Matplotlib, Python

August 2020

- Data exploration and data analysis for the feature engineering stage.
- Evaluation and implementation of binary classifiers to distinct between habitated an unhabitated households from satelital data.
- Estimation of subpopulations from an estimated distribution of habitants for each household.
- Small dataset estimation knowing only satellital information and microcensus data.

Habilidades técnicas

Lenguajes: Python, C, BASH, SQL

Development tools: VS Code, Regex, Jupyter, IPython, git, postgresSQL

Technologies/Frameworks: Linux, Docker, Pandas, Sci-kit learn, Keras, Numpy, Matplotlib

Markup Languages: Latex, Markdown

Languages: English (ESOL B2), Spanish (Native)