

Fiorella Fabris

Data Scientist

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Summary

- » Over 7 years of experience in developing in Python data pre-processing, data analysis, and data visualization methods across data sets with different characteristics.
- » Exceptional problem-solving and research skills with a solid foundation in probability, statistics and mathematical modelling, as evidenced by the completion of a Physics Ph.D. program with honors.
- » Demonstrated experience in participating and coordinating international interdisciplinary projects.

Relevant professional experience

GRADUATE STUDENT RESEARCHER, DOCTORAL CANDIDATE

Max Planck institute of Molecular Physiology
Biomedicine Research Institute of Buenos Aires

2017 – PRESENT

Dortmund, Germany
Buenos Aires, Argentina

- Built a Python library for quantifying the dynamics of time series extracted from typical single cell time-lapse movies at a large scale.
- Designed the minimal mathematical model that reproduces the dynamical encoding patterns of embryonic stem cells differentiation.
- Implemented stochastic Monte Carlo methods to study information encoding in embryonic stem cells.
- Responsible of the data analysis and theoretical description sections of a 7-years international interdisciplinary collaboration that resulted in important new insights into stem cell signaling mechanisms and will further continue.

DATA SCIENCE COURSE CREATOR

Data science Area, Acamica

OCT 2018 – JUL 2019

Buenos Aires, Argentina

- Designed and planned the technical content of a Data Science and Machine Learning introductory course for professionals focused on using Python, Pandas, Scikit-Learn, Numpy, Matplotlib, Keras and cloud computing, which was dictated periodically until March 2020.

STEM TEACHING

2013 – 2019

- Data Science Mentor | Acamica, Buenos Aires, Argentina | Oct. 2018 - Jul. 2019.
- Physics Teaching Assistant | University of Buenos Aires, Buenos Aires, Argentina | Apr. 2015 - Mar. 2017.
- Mathematics Teaching Assistant | Buenos Aires University, Buenos Aires, Argentina | Apr. 2013 - Jul. 2018.

Education

PH.D. IN PHYSICS | University of Buenos Aires, Buenos Aires, Argentina |2017 - 2022 | Qualification: Outstanding.

M.SC. IN PHYSICS | University of Buenos Aires, Buenos Aires, Argentina |2010 - 2016 | GPA: 9.27/10.

Main Scholarships and awards

BI-NATIONALLY SUPERVISED DOCTORAL DEGREE MERIT BASED GRANT | German Academic Exchange Service, Germany | 2019 - 2022.

DOCTORAL MERIT BASED GRANT | National Scientific and Technical Research Council, Argentina | 2017 - 2023.

Relevant post-graduate courses

ADVANCED SCIENTIFIC PROGRAMMING IN PYTHON SCHOOL | German Neuroinformatics Node, Camerino, Italy | 2019.

HANDS-ON RESEARCH IN COMPLEX SYSTEMS SCHOOL | International Centre for Theoretical Physics, Trieste, Italy | 2019.

INTRODUCTION TO MACHINE LEARNING | University of Buenos Aires, Buenos Aires, Argentina | 2018.

ADVANCED TOPICS OF THERMODYNAMICS AND STATISTICAL PHYSICS| University of Buenos Aires, Buenos Aires, Argentina | 2018.

SCHOOL ON NONLINEAR TIME SERIES ANALYSIS AND COMPLEX NETWORKS IN THE BIG DATA ERA SCHOOL | International Centre for Theoretical Physics - South American Institute for Fundamental Research, Sao Paulo, Brasil | 2018.

STATISTICS IN EXPERIMENTAL PHYSICS | University of Buenos Aires, Buenos Aires, Argentina | 2017.

Skills and aptitudes

Data Science
Data Analysis
Machine Learning
Mathematical modelling
Applied mathematics
Numerical Simulations
Data Visualization

Probability and statistics
Time series analysis
Problem solving
Analytical reasoning
Research
Critical thinking
Project management

Project coordination
Teamwork
Grant writing
Scientific writing
Public speaking
Presentation skills
Communication skills

Computer Languages and technologies

Python
Git
SQL
Matlab/Octave
Mathematica

C++
LATEX
Bash
Linux
Scikit-Learn

Pandas
Numpy
Matplotlib
Scipy
Seaborn

Multiprocessing
IBM Cloud
Illustrator/Inkscape
Microsoft Office

Languages

Spanish (Native)
English (Proficient)

Italian (Intermediate)
German (Basic)