Ramiro **Vignolo**

QUANTITATIVE ANALYST & DEVELOPER · NUCLEAR ENGINEER

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Summary

Applied Scientist — Vast experience in mathematical modeling, numerical simulation and programming applied in both open source and proprietary software for solving scientific problems in different domains, such as nuclear & reactor physics, heat transfer, and finance.

Professional Experience

CRISIL   *Buenos Aires, Argentina*
LEAD QUANTITATIVE ANALYST OR TECHNICAL MANAGER / SENIOR QUANTITATIVE ANALYST   *Apr. 2019 - Present*
- Design, development, and implementation of a comprehensive software framework for quantitative finance.
- Implementation of several and complex numerical methods for Stochastic Differential Equations simulation and quantitative finance models.

CRISIL   *New York, United States*
SENIOR QUANTITATIVE ANALYST   *Oct. 2018 - Mar. 2019*
- Development of plausible future forecasts for macroeconomic and market variables in the context of Current Expected Credit Loss models.
- Design, development, and maintenance of a forecasting suite which implemented several methodologies.

CRISIL   *Buenos Aires, Argentina*
SENIOR QUANTITATIVE ANALYST   *Sep. 2017 - Sep. 2018*
- Price and risk management of Equity and Hybrid (IR/FX/COMM) exotic financial derivatives.
- Scrutiny of pricing methodology, model soundness and test suite design.
- Responsible for technical documentation and executive summary report.
- Calibration, benchmarking, computational performance, hedging, limiting cases, stability and convergence tests. CCAR stress testing.

BESNA   *Buenos Aires, Argentina*
NUCLEAR ENGINEERING CONSULTANT   *Dec. 2016 - Dec. 2017*
- Design and development of Heat Transfer – Two-Phase Flow complex calculation codes for Nuclear Reactors.

TECNA   *Buenos Aires, Argentina*
S/SR NUCLEAR ENGINEER   *Oct. 2014 - Aug. 2017*
- Development of Reactor Physics (neutronic, thermohydraulic and control) high performance calculation codes.
- Detailed engineering projects for Nuclear Power Plants.
- Specialist in calculations and analysis for Nuclear Reactors.

Academic Formation

Balseiro Institute, Cuyo National University & National Atomic Energy Commission   *San Carlos de Bariloche, Argentina*
BACHELOR AND MASTER OF SCIENCE IN NUCLEAR ENGINEERING   *2011 – 2014*
- Thesis: *Conceptual Design of a Compact Nuclear Research Reactor Core.*
- Director: PhD. Eduardo VILLARINO.

National Technological University, Haedo Regional Faculty   *Buenos Aires, Argentina*
AERONAUTICAL ENGINEERING   *2009 – 2011*
- Completed the first two years.

Research Internships

INVAP S.E.   *San Carlos de Bariloche, Argentina*
NUCLEAR ENGINEERING DEPARTMENT   *Jun. 2013 – Jun. 2014*
- Nuclear Engineering graduate dissertation.

Honors & Awards

2011 – 2014   **Bachelor and Master of Science Scholarship,** National Atomic Energy Commission.
<div align="right">San Carlos de Bariloche,
Argentina</div>

Skills

Programming   C/C++/C#, Julia, Python, FORTRAN, R, Scripting (bash, AWK, sed, curl, etc), $\mathrm{T_EX}$, etc.

Software   Git (CI/CD), GNU/Linux, GNU Scientific Library, PETSc, SLEPc, GNU Octave, Matlab, Mathematica, etc.

Other

Citizenship   Argentinean.

Birth year   1990 (29 years old).

Languages   Spanish (native) and English (fluent).