Mario Alberto Santos Ervedosa

Actuary (AMASSA) | Data Scientist

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Summary

Actuary and data scientist with 4+ years of experience in credit risk modelling, workforce analytics, and advanced data science applications. Experienced in managing large datasets, building reproducible model pipelines, and translating complex statistical outputs into actionable business insights. Skilled in consulting, client engagement, and project delivery across multiple sectors, including financial services, insurance, mining, public sector, and agriculture. My interests include psychology, Brazilian jiu-jitsu, and classical literature.

Experience

Credit Risk Modelling Manager, Deloitte UK | Apr 2025 - Present
- Supported development and documentation of A-IRB credit risk models for Tier 1 UK banks, ensuring PRA/ECB compliance.
- Designed a Python-based credit risk code library, streamlining IFRS 9/IRB workflows and advancing it towards commercialisation.

Data Science Consultant | Dec 2024 – Apr 2025
- Developed GLMs on Facebook and Google Ads data to assess demographic and regional campaign performance for US insurers, driving marketing efficiency.
- Built SARIMA, Exponential Smoothing, and Prophet models to forecast crop yields and support agricultural planning.

Senior Actuarial Associate, PwC South Africa | Jan 2023 - Sep 2024
- Led three Strategic Workforce Planning (SWP) initiatives across private and public sectors, including projects for PwC Ireland and PwC Ghana that informed critical workforce decisions.
- Co-developed a first-of-its-kind SWP app, designing its data architecture in PostgreSQL/Python and modelling workforce supply and demand with survival analysis.

Actuarial Associate, PwC South Africa | Jan 2021 - Dec 2022
- Delivered assurance and analytics projects across financial services, covering credit risk, actuarial, and workforce equity.

Professional Swimmer | Jan 2014 - Dec 2020
- Competed internationally at FINA World Championships and reached finalist status at CANA African Championships.

Education

- BScHons Actuarial Science, University of Pretoria | Jan 2020 - Dec 2020
- BSc Actuarial & Financial Mathematics (Cum Laude), University of Pretoria | Jan 2017 - Dec 2019
- National Senior Certificate, Crawford College Pretoria | Jan 2012 - Dec 2016

Tech Stack

Languages & Tools
Python | SQL | Power BI | Excel | SAS | Git

Libraries
scikit-learn | pyspark | duckdb | TensorFlow | shap | pandera | Seaborn | Statsmodels | polars |

Certifications

Actuary (AMASSA) *ASSA*
Data Scientist *Codecademy*

Projects

Strategic Workforce Planning
PwC | 2024
Managed an engagement with a public entity, focused on building a Power BI dashboard with scenario analysis capabilities to support SWP.

Equal Pay ML Modelling
PwC | 2023
Built a decision tree model to highlight pay disparities based on race or gender. Developed a Power BI dashboards to visualise findings.

IFRS 9 Credit Risk Model Audit Support (Tier 1 Bank)
PwC | 2022
Calibrated the EAD model for accounts that increased limits. Supported the testing of the FLI model and aided in validating the PD model (built using a Cox Proportional Hazard approach).