Long Le

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EDUCATION

University College Dublin (UCD) ***Dublin, Ireland***
MS in Data Computational Science, First-Class Honours *2018- 2019*

University of Arizona ***Arizona, USA***
BS in Industrial Engineering (Statistics track), equivalent to First-Class Honours *2013-2017*

EXPERIENCE

Finalyse ***Amsterdam, Netherlands***
Quantitative Risk Consultant / Specialist. *Aug 2022 – Present*

- Currently consulting in the field of quantitative risk management for various banking clients in the Benelux region with 3 significant projects with the "lending arm of the European Union".
- **European Investment Bank (EIB):** Derivation of Climate risk adjusted Credit risk parameters.
  - Served as main modeler for the first climate risk stress test of the world's largest climate finance provider.
  - Developed a comprehensive tool to consolidate diverse data inputs and user-defined parameters, enabling the efficient production of customized climate risk stress test reports and visualizations.
  - Applied the already prescribed ECB methodologies and finally derived the results producing climate shocked financial variables (Total Assets, Revenues, Expenses), and climate shocked PDs.
- **European Investment Bank (EIB):** Implementation of S&P Global RAC Ratio & RWA Model.
  - Led the migration and implementation of the EIB RAC Ratio & RWA Model from SAS to Python (OOP framework), ensuring compatibility with the Bank's Hybrid Platform.
  - Effectively deployed the RAC model in accordance with the latest S&P Global guidelines, ensuring complete reconciliation with current model outputs.
  - Collaborated with cross-functional teams to integrate the model into the Bank's infrastructure, contributing to improved model performance and scalability.
  - Leveraged Python packages to bolster reporting capabilities and enhance visualization.
- **European Investment Bank (EIB):** Development of CDO (Collateralized Debt Obligation) Model.
  - Migrated model from Matlab to Python. Integrated and expanded upon the latest state-of-the-art Copula methodologies within the CDO model.
  - Optimized the Monte Carlo simulation by harnessing Python's vectorization for efficient memory management and computing power, enabling an increase in the number of simulations to one million.
  - Coordinated the integration of the model into the Bank's Hybrid Platform, ensuring a seamless transition and improved computational efficiency.
- **Garanti BBVA Bank International:** Development of Non-Retail IRB PD Scorecard Models.
  - Developed non-retail IRB PD scorecard models, and explored different modelling techniques for highly low-default non-retail portfolio.
  - Applied multiple Low-Default Portfolio calibration techniques to ensure accurate risk estimation, and applied margin of conservatism (MoC) framework.
  - Implemented the Supervisory Slotting technique in accordance with EBA guidelines for the Trader portfolio, alongside updating the risk driver list.
- **Finalyse iQonsensus project:** Derivatives-based consensus price calculation tool.
  - iQonsensus provides derivatives-based consensus market data for independent price verification and valuation control. More details here
  - Led the development of a consensus data manipulation and statistics calculation, and option pricing engine as the lead quantitative developer.
  - Built a Python project using Object- Oriented Programming framework to clean data, ensure quality, calculate consensus data, and develop an option pricing model.
  - Developed model output visualizations and automated custom reports in Python, streamlining analysis and decision-making.

PTSB Bank ***Dublin, Ireland***

Senior Credit Risk Modeler *Sep 2019 – Aug 2022*

- Developed data-driven and predictive models across Probability of Default (PD), Loss Given Default (LGD), Exposure of Default (EAD) and State of the Economy (SOE) models.
- Calculated and explained movement of ECL and Sensitivity Testing on monthly, quarter basis.
- Redevelop and calibrate IRB Behavior Scorecard models, and IFRS9 PD models to reflect current Macro-Economics.
- Performed Impartment Loss Forecasting, Default Volume Forecasting using statistical modelling.
- Produced high quality value-add analysis and insights across data mining and trend analysis and develop optimum segmentation strategies
- Provided technical advice and assistance to other teams and team members on credit risk modelling.
- Key Projects: BTL Scorecard IRB-model development, Sensitivity Testing ECL for ICAAP, redevelopment and testing of IFRS-9 PD models (Starting Points of SOE PD, SOE Runs, and Hazard PDs), redevelopment of IFRS-9 LGD model, credit risk monitoring dashboard.

Nielsen ***Vietnam***

Graduate Statistician *Oct 2017 – Sep 2018*

- Conducted sample design and advanced data analytics
- Descriptive Analytics: Correlation, Regression, Exploratory Data Analysis, Factor Analysis
- Predictive Analytics: Developed Machine Learning models for Regression, Classification, Missing Data Imputation, and Customer Segmentation using EM with GMM
- Delivered statistical outputs to client service personnel and clients in simplified, non-technical language. Key projects involved User Segmentation, Revenue Prediction for CVS stores, Market-Basket Analysis for Supermarkets, and Data Visualization using RShiny.

CERTIFICATES

- Financial Risk Manager (FRM) Part 1 (September 2023)
- Advanced Credit Risk Modeling for Basel/IFRS 9 using R/Python/SAS (September 2022)
- SQL Fundamentals with PostgreSQL – DataCamp.com (January 2022)
- Machine Learning Scientist with Python – DataCamp.com (May 2020)
- Data Science Track with R – DataCamp.com (December 2017)
- DeepLearning.ai – Coursera (October 2020)

PERSONAL PROJECTS

- Blog Post in Credit Risk Modeling:
  1. Approach to predicting the IFRS9 Macroeconomic.
  2. Utilizing Machine Learning for Feature Engineering in Credit Risk Models

- Rpubs for personal projects in R: https://rpubs.com/longrio94/
- GitHub for personal projects in Python / R: https://github.com/longrio94'

SKILLS

Hard Skills: Credit Risk Modelling (IRB, IFRS-9, SA-RWA, Retail, Non-Retail), Statistical Learning, Machine Learning, Data Science.

Programming languages: Python, R, SAS-EG, SAS-Miner, SQL (Teradata).