Ing. Rafael Schwarzenegger, Ph.D.

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Languages
Fluent in English, German and Czech. Basic user of French.
UK work permit until 2026.

Experience

Senior Associate, Kyndryl 02/2024 – now
Remote Level 2 IT Support Specialist with German. The role combines the know-how of tech support with problem solving and customer service. Working with Intune, AD, BeyondTrust, PowerBI. Undergoing MS-900 certification: M365 Fundamentals, PL-900: Power Platform Fundamentals, AWS Cloud Practitioner, GoogleCloud Associate Cloud Engineer.

- AWS Cloud badges: AWS Partner: Generative AI Essentials, AWS Cloud Quest: Cloud Practitioner, AWS Educate Machine Learning Foundations, etc.

https://tryhackme.com/p/rafgger https://www.credly.com/users/rafael-schwarzenegger
https://learn.microsoft.com/en-us/users/rafael-schwarzenegger
https://www.cloudskillsboost.google/public_profiles/1cdface0-dd68-498b-8196-658b7a6583ad
https://g.dev/rafael-schwarzenegger

Research Associate, University of Strathclyde 11/2023 – 04/2024
As a member of an AI research group, I contribute to the exploration of Artificial Intelligence's role in enhancing information retrieval for Intangible Asset Auditing in cooperation with the University of Strathclyde and Intanify Ltd., a partner company.

- Main topics: RAG (Retrieval Augmented Generation) and automation vs. augmentation
- Project funded by Innovate UK with a total grant value of £550k.

My responsibilities include formulating research objectives and proposals in collaboration with colleagues, under the guidance of senior team members.

Master's Thesis Supervisor, University of Strathclyde 05/2023 – 09/2023
Supervised dissertations for five Master students on topics Space Data as a Service, and ALARP - Cost-Benefit Decision Making Under Uncertainty. Responsibilities encompassed providing direction for their research endeavours, managing projects efficiently to ensure deadlines were met, and facilitating successful completion of their degrees.

Tutor in Classes, University of Strathclyde 02/2018 – 01/2022

- Risk Management, Spreadsheet Modelling (VBA), Business Analysis & Technology.

Team member – Czech Science Foundation project 03/2017 – 07/2017
Explored tracking models, such as Kalman filtering, for sensor-data analytics and engaged in stochastic signal processing studies. Utilized Matlab for programming Fourier decompositions of signals. Collaborated with a research team to produce a joint research output based at the Department of Telecommunications, Brno University of Technology, in partnership with the Technical University Vienna. The project, funded by the Czech Science Foundation (GAČr) under Reg. No. 17-19638S, focused on "Sequential Bayesian Estimation of Arterial Wall Motion."

Education

PhD in Management Science, University of Strathclyde 10/2017 – 10/2023

Obtained degree with my thesis titled: An Investigation of Estimation Performance of a Multivariate Poisson-Gamma Model with Parameter Dependency. doi: 10.48730/sh56-af78

- By accounting for correlation, it was possible to reduce the estimated %MSE by almost 50%.

Improved the forecasting estimation to support business decisions by making use of correlation between failure rates, empirical Bayes framework, copula tail dependency structures. Conducted large scale data simulation with parallel computing including deployment of Archie supercomputer. Held talks at conference ESREL2020, faculty's risk consortium, and seminars.

- Schwarzenegger, R., Quigley, J. and Walls, L. (2021) 'Is eliciting dependency worth the effort? A study for the multivariate Poisson-Gamma probability model', *Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability.* doi: 10.1177/1748006X211059417

Engr in Mathematical Engineering, Brno University of Technology 10/2015 – 06/2017

- Master's thesis Mathematical Models of Reliability in Technical Applications. Pioneering INLA method in R for a technical application at my university.
- In R programmed analysis including data manipulation and function writing. Attended with my thesis the competition SVOČ (Student Research and Professional Activities) presenting my master's thesis.

Norwegian University of Science and Technology 01/2016 – 06/2016

- Studied for a semester with the exchange program Erasmus in Trondheim – Norway.
- Courses taken like Computer Intensive Statistical Methods (including KNN, cross-validation, from curriculum) from the Department of Mathematical Sciences; Optimization and Control. Course on Visualization of Scientific Data at Oslo University.

BSc in Financial and Insurance Mathematics, Masaryk University 10/2012 – 06/2015

- Worked on industrial client's data in Bachelor's thesis: Statistical methods for the assessment of the quality of work process. Employed the Design of Experiment (DoE) methodology on self-collected data from industrial partner and improved quality of production.
- Passed courses like Financial Mathematics and Mathematical Analysis, Computational Statistics, Database Systems and specifically Data Mining taught the handling of data, development of credit scoring models.
- Predictive Model on yearly data for industrial client merchandise retailer Kaufland. Specifically, demand forecasting of fresh fruit and vegetables for the Czech Republic.

IT Skills

MS Office: Visual Basic, Microsoft Word, PowerPoint, Excel (VBA), Overleaf (LaTeX).
Statistical analysis software: Minitab, PowerBI, Tableau, SPSS, SAS, PySpark, SQLite, Reliability Workbench, Gretl.
Computer Languages: Python (Pandas, NumPy, Matplotlib), Matlab, R, SQL, some C, some JSON.
Marketing: AdWords, Google Analytics, Sklik, Google Tag Manager (GTM).

Personal skills

I am playing the piano for 12 years with successfully participating in competitions and had my own concerts. I like doing sport, especially martial arts. My passion is as well reciting English poetry deepening my language skills.

References available on request.