DANIELLE VAN ZYL

Actuarial Pricing Manager / Data Scientist

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Python | SQL | R | Machine Learning | hx Renew - Data Visualization

WORK EXPERIENCE

EY **London, UK**
Manager Apr 2024 – Present
- Actuarial manager in the non-life insurance team, focused on commerical pricing, pricing transformation and AI.

Senior Consultant Feb 2022 – Mar 2024
- Consulted on a variety of projects across retail and commerical pricing, replatforming of pricing models, catastrophe modelling and claims analytics.

ABSA Insurance Company **Johannesburg, South Africa**
Actuarial Analyst Feb 2019 – Jan 2022
- Analyst in a Pricing & Analtyics team (team of actuaries and data scientists) in a short term bancassurer supporting with pricing, analytics and data driven decision making projects, as well as strategic decision making.

PROJECTS

EY

Pricing, Transformation, Change Management Feb 2022 – Present
- **Re-platforming Commercial Raters for Global Syndicate** - Serving as Engagement Manager for the implementation of hx Renew pricing models, coordinating cross-functional teams (Data, IT, Underwriting, Pricing) to establish a common development framework and ensure successful model deployment.
- **Machine Learning for Reserving** - Leading the internal R&D team exploring the use of machine learning models to improve actuarial reserves estimates.
- **Actuarial AI Community Leadership** - Coordinated EYs European Actuarial AI community, fostering collaboration on AI asset co-development and maximizing the utility of existing work.
- **Pricing Function Evaluation** - Conducted comprehensive reviews of insurers pricing models and functions, delivering insights on industry best practices, pricing and model deployment platforms, data management, pricing methodologies, and operational structure.
- **UK Home Insurance Market Analysis** - Contributed to EYs annual home seminar by analyzing market data to provide a detailed report on the UK home insurance landscape.
- **Catastrophe Modelling Strategy** - Part of a cross functional EY team advising a multinational insurer on strategic decisions for their catastrophe modeling platform, focusing on natural disaster pricing and portfolio aggregation.
- **Re-platforming Commercial Raters for Large Global Insurer** – Led the technical development of commercial raters within hx-Renew through a lead developer role. Led the creation of best practice guidelines for rater migration and development within hx-renew. Assisted in the design of a global centralised support team structure.
- **Project Management** - Acted as Technical Project Manager for a U.S.-based team of actuaries and developers, overseeing the creation of web-based pricing models.
- **Claims Analytics Enhancement** - Analyzed claims data using Python for a UK retail insurer, aiding in strategic cost reduction initiatives and designed PowerBI claims monitoring dashboard with key performance indicators.
- **Financial Planning and Analysis** – Developed a business planning model for a commercial (re)insurer, enabling the projection of financial statements (P&L, Balance Sheet, Cash Flow) on both UWY and GAAP bases over a five-year forecast period.

ABSA Insurance Company

Pricing, Modelling, Analytics & Monitoring Feb 2019 – Jan 2022
- **Sales Incentive Scheme Automation** - Redesigned and automated a sales incentive program for 70+ call center agents, integrating a real-time dashboard to monitor incentives and KPIs, aligning remuneration with business performance.
- **Landlord Insurance Product Development** - Led the creation of a novel rental insurance product, overseeing all stages from concept to launch, including MVP design, business case formulation, financial forecasting, pricing strategy, policy documentation, underwriting criteria, customer experience, and marketing plan.
- **Predictive Modelling** – Developed a policyholder survival model to inform discounting strategies, optimized call center staffing with a capacity model, and designed an algorithm for debt collection efficiency to reduce policy non-renewals.

- **Pricing Model Updates** - Conducted performance reviews and enhancements of pricing models, adapting to new data insights and market disruptions such as the Covid-19 pandemic.
- **New Product Pricing** - Priced new to market insurance products, including extended warranties, legal cover, medical gap cover and rental default insurance. Assisted with vehicle telematics and homeowners pricing.
- **Strategic Analytics Support** - Provided the Product and Executive team with data-driven insights to inform strategic initiatives.
- **Business Performance Monitoring** - Established and maintained monitoring processes using SQL, Python, and PowerBI for the direct business line, presenting insights and analytics to stakeholders.
- **ABSA Innovation Competition Winner**: Achieved first place in the 2019 ABSA Innovation competition, outperforming continental rivals with a pitch for an innovative product offering.

EDUCATION

University of Cape Town   **Cape Town, South Africa**
MPhil in Financial Technology (Part time)   Mar 2021 – Dec 2024
- **Courses**: High Performance Computing, Supervised/Unsupervised Learning, Databases, Financial Systems Design, Blockchain, Financial & Digital Economics
- **Thesis**: The discontent of social scoring through state surveillance using the Chinese Social Credit system as a case study.

North West University   **Potchefstroom Campus, South Africa**
BSc/Honours in Actuarial Science   Jan 2015 – Dec 2018
- **Honors**: Cum Laude with an 83% average and 86% average respectively

AFFILIATIONS

- Technical Associate (TASSA) of the Actuarial Society of South Africa (ASSA) with two actuarial exams left to complete for Fellowship designation (IFoA eqvivalent: SA3, SP7)