european
actuarial
academy

Title

Investigating Applications of Data Science in UK and non-UK Actuarial Teams

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Speaker/Company

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Abstract

Significant changes in technology, regulation, markets, customer behaviour, the environment and other global trends are influencing the actuarial department. The increasing availability of big data, The availability of technical data science skills, and the application thereof; are changing how insights are being derived and continuing to shape the operating model of the actuarial department.

We performed benchmarking exercises which involved structured interviews with senior first line actuarial department representatives from different UK, South Africa, Belgium, Luxembourg & Switzerland life and non-life insurance organisations to investigate how the insurance industry is utilising data science, with a focus on application and use cases within an actuarial context. We investigated the strategy and the operating model within which data science is used including the types of tools and techniques being used.

Within our benchmarking exercise we also included themes around the types of data; the technical nature of machine learning techniques and software being used; and wider considerations including risks, risk management, governance, and ethics related to data science.

We investigated trends impacting the skill set required by those working within Data Science and the barriers to adopting data science.

We interviewed representatives from first line actuarial departments mainly with Heads of Actuarial Reporting and Pricing Departments, Heads of Actuarial Systems and Heads of Actuarial Transformation and Strategy including direct insurance organisations and group entities.

Our talk will summarise the findings from this Actuarial Data Science benchmarking exercise.

Our talk will go further and explore, based on the above investigations of use of data science in actuarial findings the actionable steps and recommendations to optimise the use of data science within insurance and non-insurance industries.

We will explore the changes that we are expecting to see in order to extract value and how those changes could be managed and implemented.

Biography

Valerie du Preez FIA, Managing Director, Actuartech & Dupro Ltd:
Valerie has played a key role in the IFoA's journey with data science including
•   Modelling Analytics and Insights Data Science Working Party and the subsequent Practical Applications Papers
•   Data Science Member Interest Group and Virtual Conference

• A task force member working on the ethical guidance for practitioners working in data science

She advises insurers and technology providers on the application of data science that incorporates business domain experience and optimal strategies that delivers data driven insights. She launched actuartech.com: an insights page providing thought leadership on the topic of technology and data science, for actuaries.

Xavier Maréchal, IA|BE qualified actuary, CEO Reacfin SA:
Xavier is an expert in non-life and Heakth pricing and provisioning. For a few years, he tries to incoporate Data Science in traditional actuarial practices (e.g. Pricing). He is also leading the Prepare and Educate part of the Data Science working group at IA|BE

Anja Friedrich, Actuary SAV, Manager at Synpulse Management Consulting:
Anja is leading the competence center for Product and Pricing Management at Synpulse Management Consulting. She focuses on advising insurers about interdisciplinary topics of actuarial know-how and IT. She is supporting the Swiss Data Science Working Group to generate awareness of the importance of Data Science for actuaries.