

Title

---

**Survival Analysis & DataOps**

---

Speaker/Company

**Razvan Ionescu, Antoine Chancel / SCOR**

---

Abstract

The life insurance industry business is knowledgeable in estimating the severity and occurrences of specific events occurring in human life : death, retirement, disability, critical illness (cancers, stroke, heart attack), ... Those events may or may not happen in the records of the insurance company resulting in partial measurements of the information. Over the last decades, life actuaries endeavored to accurately estimate the risks using traditional survival models as they are critical for the financial projections of insurance portfolios, the pricing of new businesses or the underwriting of new applicants.

The discoveries in data science (machine learning and deep learning) enabled the insurers to better analyse very large and complex datasets. The expansion of the data is the result of a larger number of biometric features collected on an individual at the underwriting stage and throughout the policy life. Secondly, the Asian markets are taking a larger place in the global insurance industry and hold billions of individuals to protect. In this context, machine learning techniques can improve the traditional models that are not relevant or may not even be calibrated.

In this presentation, SCOR shares an in-depth analysis of machine learning techniques applied to survival models with illustrations on certain business usecases. SCOR will also explain how the Data Analytics team develop, test, package and share machine learning algorithms adapted to survival analysis with Python. This development lifecycle is at the core of sharing quality knowledge with actuaries who compute pricing sensitivities and developers who build innovative services for the life insurance industry.

---

Biography

Razvan Ionescu - Head of Biological Risk Modelling

Antoine Chancel - Software Engineer & Actuary

---