

«Actuarial Data Science Après-Midi»

The Data Science working group of the Swiss Actuarial Association (SAA) is happy to announce the next event of the Actuarial Data Science Après-Midi series.

Topic	Survival Models
Date & Time	Wednesday, 03.09.2025, 18:00 to 19:00
Location	Hotel St. Gotthard, Bahnhofstrasse 87, 8021 Zürich
SAA CPS	1
# Participants	35

Abstract

This presentation offers a comprehensive overview of both classical and machine learning methods for survival modeling. We will begin with foundational statistical approaches, including the Cox proportional hazards model, the Weibull model, and the accelerated failure time (AFT) model, emphasizing their assumptions, mathematical formulations, and estimation procedures.

Following this, we will introduce a range of modern machine learning methods that have been adapted for survival analysis, such as survival trees, random survival forests, gradient-boosted survival models, and neural networks. Special attention will be given to recent advancements in deep learning, including DeepSurv, DeepHit, and Transformer-based survival models.

Additionally, links to code examples using real-world health data from the US and a synthetic dataset will be provided.

Daniel Meier, Life & Health R&D Manager at Swiss Re

Daniel holds a diploma in Mathematics and a PhD in Computer Science, both from University of Konstanz in Germany. He joined Swiss Re in 2008, working in Risk Management where he was essential for the development of Swiss Re's Group Risk Model used for regulators and internal capital allocation. Daniel is a fully qualified actuary of the Swiss Actuarial Association, where he also actively contributes to the Data Science working group, and joined the Swiss Re Institute as member of the Life & Behaviour R&D team in 2020, where he is working on individual health forecasting models.