Title

The Risk of Secondary Use of AI Models: Why the Insurance Sector Should Care About Purpose Limitation

Speaker/Company

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Abstract

Insurance has always relied on statistical modelling to classify, price, and manage risk. Today, advances in artificial intelligence promise unprecedented predictive accuracy. Yet the most significant shift is not simply improved modelling performance, but the emergence of powerful AI systems developed outside the insurance sector — in medical research, behavioural science, consumer technology, and large digital platforms.

These models encapsulate highly sensitive predictive knowledge generated for specific research or commercial purposes. Once trained, however, they can be transferred into insurance contexts for underwriting, pricing, or risk scoring — without requiring access to the original data and often without breaching existing data protection law.

This keynote explores the risk of abusive secondary use of AI models and its implications for insurers, regulators, and actuaries. I argue that the current legal framework leaves a critical gap: while data use is regulated, model use largely is not. I propose an updated principle of "purpose limitation for AI models" as a way to reconcile technological innovation with societal responsibility.

For the actuarial profession, this debate goes to the core of its mandate: ensuring that risk classification remains legitimate, transparent, and aligned with public trust.

Biography

Rainer Mühlhoff, philosopher and mathematician, is full professor of Ethics of Artificial Intelligence at the University of Osnabrück. His research focuses on ethics, data protection and critical social theory in the digital society. In his interdisciplinary work, Mühlhoff brings together philosophy, media studies and computer science to investigate the interplay of technology, power and social change. Contact and further information: https://RainerMuehlhoff.de/en/