Innovative solutions for cyber risk

Abstract:

Experian, a leading provider of business data and analytical insights, has developed a ground-breaking new model to predict businesses that may have an elevated risk of a cyber event. We combined our vast collection of cyber data with our financial and business data to create this model for predicting cyber risk.

The primary use case for our approach is reinventing and optimizing underwriting solutions for the insurance industry but we envision a broader application across verticals. Experian has partnered with select commercial insurers to validate this model, which consists of a risk score and predictive attributes. Our data scientists are experts in machine learning and artificial intelligence, as well as traditional statistical approaches. Our data and approach provide a path for predicting the risk of a business incurring a cyber-related event in the future.

Damages as a result of cyberattacks are expected to cost $6 trillion annually by 2021[1]

For consumers and businesses alike, the threat of cyber-attacks has become a constant risk to their financial health and the negative impact is growing exponentially. Damages as a result of cyber-attacks are expected to cost in excess of $6 trillion annually by 2021[1]. Many attacks target the most vulnerable with nearly half of all cyber-attacks affecting small businesses and the percentage is expected to continue rising[1]. Also, global spending on cybersecurity products and services are predicted to exceed $1 trillion cumulatively over the five-year period from 2017 to 2021, growing 12-15% year-over-year[1]. Therefore, exposure for organizations and specifically for cyber insurers, is material based on this damage.

Critical but missing elements in cyber risk solutions

Today's cyber risk solutions for the insurance industry focus on measuring computer networks, infrastructure security, application patching, data governance and employee technology policies. Cyber underwriters have shared with us that all these solutions fall short as they ignore the most critical element – the human element.

People are error-prone and unpredictable. Inadvertent employee mistakes, malicious behavior, or victimization can lead to cyber exposure. More than 70% of employees have access to data they should not[2].

Experian has framed the cyber risk problem differently and created a better solution by holistically bringing together the data and data science in an innovative way.

A better way

We use machine learning to bring together data elements, build linkages, and construct a model that will more effectively predict cyber risk based on the behavior of employees and based on the cyber exposure of employees.

[1]https://cybersecurityventures.com/cybercrime-damages-6-trillion-by-2021/
[2]HBR: What's Your Data Strategy" May-June, 2017

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We start with our bedrock – decades of experience working with the top US carriers on traditional risk modeling using diverse data sets. When it comes to cyber risk, we continued where others have left off and created a new paradigm for the industry. We are capturing employee cyber exposure, aggregating to the business, and modeling this relationship with respect to cyber risk.

We are identifying the connections between companies, employees, dark web behaviors, and data breaches. Our solution scores the likelihood that a specific business is at elevated risk of a cyber event. We also compare a business against its industry peers. Future efforts may include analyzing trading partners and the risk presented by supplier relationships.

This innovative deep dive into connecting the darkest part of cyber activities at the individual level, combined with Experian's business analytics, is providing new ways to optimize cyber underwriting.

Leader in Data Science and Innovation

With billions of records across hundreds of millions of both consumers and businesses, Experian is the leader in providing data-driven solutions to help organizations understand risk and drive decisions. In fact, we are working with some of the largest insurance carriers in the world. Also, we are consistently adding new sources of alternative data to gain greater visibility into consumers and businesses, while adding value for our clients.

The underpinning of Experian's solutions is based on decades of substantial investment in innovative technologies and businesses to drive the latest data science into the market. As a 5-time winner of Forbes Top 100 World's Most Innovative Companies Award, Experian has been recognized by the industry as a leader in developing the technologies that allow our customers to disrupt markets.

Experian's data scientists have deep expertise in machine learning and artificial intelligence, as well as in advanced and traditional statistical techniques..

Let Experian Help You Mitigate Cyber Risk

To learn more about Experian's Business Cyber Risk Solutions, please visit us at www.experian.com/business-information/cyber-risk-solutions.

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