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Module 2: Case studies of AI and InsurTech

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Developing Technology Foresight:
Case Study of Artificial Intelligence (AI) in InsurTech

Module 2
Case studies of AI and InsurTech

Acknowledgements

Module 2 objectives

- Discuss, analyze, simplify, and associate various applications of AI to the current needs of the Insurance Industry

- AI in Customer Service: Usage-based insurance, proactive analytics, chat-bots.

- AI in Marketing: Classification, summarization, template generation, mix-and-match policy, insurance advice.

- AI in Underwriting: The risk score, instant insights, and aids for the underwriter.

- AI in Fraud Detection and Claim Processing: Fraud detection, information validation, damage assessment, claims processing

Module 2 Learning Outcomes:

Upon completion of Module 2, students will be able to analyze, simplify, and associate various applications of AI to the current needs of the Insurance Industry. In particular:

- AI in Customer Service. Usage-based insurance, proactive analytics, chat-bots.
- AI in Marketing. Classification, summarization, template generation, mix-and-match policy, insurance advice.
- AI in Underwriting. The risk score, instant insights, and aids for the underwriter.
- AI in Fraud Detection and Claim Processing. Fraud detection, information validation, damage assessment, claims processing.

Topics in Module 2

1. Pricing and Underwriting

2. Quote, bind issues

3. Policy administration and central systems

4. Claims and settlements

Ice breaker

Who is your favorite Disney hero or heroine? Would you trade places with them?

What would your talent be if you were Miss or Mister World?

2.1. Pricing and Underwriting

- Pricing and underwriting are the core competencies of insurers.for example, the role of Internet price comparison websites (also known as "aggregators" and, arguably, the first real InsurTechs) in personal lines. As consumers, we can now compare numerous prices for the same or similar cover almost instantaneously and decide to buy if we are so inclined.

- In affected markets, the result has been to trigger the beginnings of what we have described as a "technology arms race" of pricing sophistication. This sees forward looking insurers using a far broader set of data sources, more advanced analytics and more agile processes to set and maintain their pricing and underwriting structures.

2.1. Pricing and Underwriting (cont.)

- the need for proactive data strategy is widely recognized so that the data available for pricing and underwriting decision support doesn't leave insurers disadvantaged as compared with their competitors. Commercial lines insurers, emboldened by emerging analytics techniques that make it feasible to extract useful pricing and underwriting information from much smaller data sets, are also pursuing this approach to support small to midsize enterprise (SME) business portals, intelligent automation and stronger case underwriting. Similar developments are rapidly making their way further up the premium band into mid-market and even large commercial insurance.

- In general, the data are enabling insurers to better tailor the offer, pricing and underwriting to the individual customer while improving the customer experience and outcomes — a win-win. The best insurers are most advanced in recognizing and driving this virtuous circle.

2.2. Quote, bind issues

- The process of quoting, binding and issuing insurance policies is commonly referred to by many simply as "Quote, Bind, Issue."

- Historically, this process of quoting, binding and issuing was labor intensive, required a lot of double entry and involved a painstaking process of drawing up new contracts from scratch. In today's markets, however, these policies can be generated from the processes of risk selection, risk pricing, quoting and binding.

- The process of Quote, Bind, Issue has, in many global markets, become one seamless, end-to-end transaction of insurance business in real time. Immediate access to rating matrixes, automated processes around data entry, automated messaging, reminders and trackers, online formatting and digitized rules engines have all allowed this process m to become much less labor intensive when compared with as recently as 15 years

2.2. Quote, bind issues (cont.)

(Picture of Quote, bind issues)

2.3. Policy administration and central systems

- Across the globe policy administration and central management systems are known by various names and include a range of functions. Broadly these can be broken down into document management systems (DMS), content management systems (CMS), customer relationship management (CRM) and enterprise content management (ECM).

- In order for policy administration systems and central management systems to run properly, they must contain a DMS that concurrently is able to fulfill the following tasks:

2.3. Policy administration and central systems (cont.)

- (Picture of Policy administration)

2.3. Policy administration and central systems (cont..)

- The appropriate receipt of structured and unstructured data can be achieved by natural language reading/ processing, scripted data paths and other types of character indexing. Sentiment analysis and latent semantic indexing are two of the text mining techniques that can help (re)insurers unlock the hidden value of unstructured text data, improving prediction accuracy and creating decision-making engines that more closely match human performance.

- Using robust policy administration and central management systems effectively, data (both structured and unstructured) can not only be captured but also be put to work to generate untold benefits for (re)insurance entities and their respective client base alike. The fruits of this new approach will revolutionize the relationship that our industry has with the data that abounds.

2.4. Claims and Settlements

- Claims processing is a simple chain of events: notice of loss > loss validation > transfer of funds. Trust plays an important role in claim processing. There are swathes of the general public who feel that insurers will do just about anything to relieve themselves of their obligations to policyholders. On the other hand, the insurance industry has had to deal with the issue of fraud for centuries, and this has created, over time, varying degrees of subconscious bias, which have been factored into the various equations around claims and settlement. That is to say, there are arguably justifiable trust issues on both sides.

- Technology and InsurTechs can play a major role in correcting issues of trust and culture as well as performing tasks that result in expediency and costs savings. In redefining certain interactions into rules-based processes, historical biases can be rethought, and the benefit of this should serve both insurer and a policyholder.

2.4. Claims and Settlements (cont.)

(Picture of claims and settlements)

(Table of claims and settlements)

Module 2- Highlights

- AI in Customer Service. Usage-based insurance, proactive analytics, chat-bots.

- AI in Marketing. Classification, summarization, template generation, mix-and-match policy, insurance advice.

- AI in Pricing: AI and Actuaries

- AI in Underwriting. The risk score, instant insights, and aids for the underwriter.

- AI in Fraud Detection and Claim Processing. Fraud detection, information validation, damage assessment, claims processing.

Module 2 Review Questions

1. Explain the application of AI in Quote, bind issues?

1. Explain the application of AI in Policy administration and central systems?

1. Explain the application of AI in Underwriting?

1. Explain the application of AI in Fraud Detection and Claim Processing?