
INSURANCE CLAIM PREDICTION USING MACHINE LEARNING

Tanjila sheikh^{*1}, Akanksha Hadge^{*2}, Sneha Bante^{*3}, Kalyani hukare^{*4}, Sagar Bangare^{*5},

^{*1,2,3,4,5,6,7,8}Computer Science & Engineering, Madhukar Rao Pandav College of Engineering, Bhandara,
Maharashtra, India

ABSTRACT

Now a day's Data is playing a central role and is carrying the big asset in the insurance industry. In today's journey insurance industry has a vital role. Insurance transporters have access to more information than ever before. from 15th century to 1960, industry followed the manual era, from 1960s to 2000 we are in the systems era, now we are in digital era i.e. 2001-20X0. The highest corporate object in all three eras is that the fundamental insurance industry has been determined by believing the data analytics in adopting the changing technologies to better and keep the ways and keep capital together. In advanced analysis the main challenge is the analytical models and algorithms which are being insufficient to support insurers; only by machines we can overcome this challenge.

I. INTRODUCTION

The most important advantage of Machine Learning (ML) to use in Insurance Industry is to facilitate data sets. Machine learning (ML) can be successfully useful across Structured, Semi Structured or Unstructured datasets. Machine learning can be used accurate across the value chain to identify with risk, claims and customer actions, by means of advanced predictive accurateness. The probable applications of machine learning in insurance are plentiful from perceptive risk appetite and premium leakage, to expense administration, subrogation, proceedings and fraud detection. Machine learning is not a novel technology; this technology is following from the last few decades. There are 3 main categories of learning they are supervised learning, Unsupervised Learning and reinforcement learning. The greater part of the insurers are following Supervised Learning from last few decades for assessing the risk by means of known parameters in dissimilar combinations to acquire the preferred outcome. Present age insurers are motivated to unsupervised learning, in this predestined goals are clear. If there are any modifications in the variables, the method identifies those modifications and tries to change as per the goals. For example according to traffic the GPS Suggests different routes dynamically based on traffic conditions. In insurance industry also the learning is adopted for usage based insurance. Reinforcement learning is mostly depends on ANN (Artificial Neuron Network), Target/ Goal can be modified dynamically depending on objective. Reinforcement learning is used for IOT applications.

II. CHALLENGES IN IMPLEMENTING MACHINE LEARNING

Most insurers recognize the value of machine learning in driving better decision-making and streamlining business processes. Research for the Accenture Technology Vision 2018 shows that more than 90 percent of insurers are using, plan to use or considering using machine learning or AI in the claims or underwriting process. Some of the challenges insurers typically encounter when adopting machine learning are

1. Training requirements

AI-powered intellectual systems must be trained in a domain, e.g., claims or billing for an insurer. This requires a separate training system, which insurers find hard to provide for training the AI model. Models need to be trained with huge volumes of documents/transactions to cover all possible scenarios.

2. Right data source

The quality of data used to train predictive models is equally important as the quantity, in the case of machine learning. The datasets need to be representative and balanced so that they can give a better picture and avoid bias. This is important to train predictive models. Generally, insurers struggle to provide relevant data for training AI models.

3. Difficulty in predicting returns

It's not very easy to predict improvements that machine learning can bring to a project. For example, it's not easy to plan or budget a project using machine learning, as the funding needs may vary during the