**Project ideas**

1. **Chatbot for resolving complex insurance queries**

Anthem has a number of health plan under various categories such as medical, pharmacy, dental, vision and life and disability etc. Currently customer representatives attend to calls like

“I am insured with you, if I undergo some surgery, am I covered”

“ I want to undergo a particular treatment, is it covered under tha plan”

“ Why am I not eligible for a particular treatment”

“Why the claims are not paid”

Currently all these calls are done manually, and the customer care representative has to look up a multitude of documents [explanation of coverage document (EOC which is a pdf file), other pdf or text documents, claim data bases etc] to answer the questions. No single document is good enough for answering the queries. A condition in one document could be either superseded / negated by a condition in another document.

The requirement is to create a Chatbot with an AI / automated capability where the above process is hugely simplified for the customer representative by giving right responses going through the information available.

1. **Text Classification**

All departments have a number of documents which are generated through online searches, internet, news feeds, electronic mail, corporate databases, medical patient records and digital libraries. It is often difficult to automatically categorize or classify them into predeifined categories. Using machine learning techniques, through a a general inductive process automatically build classifier by learning, from a set of pre-classified documents and the characteristics of the categories. The advantages of this approach over the knowledge engineering approach (consisting in the manual definition of a classifier by domain experts) are very good effectiveness, considerable savings in terms of expert labor power, and straightforward portability to different domains.

Implement a project which involves document representation, classifier construction, and classifier evaluation through machine learning.

1. **Use ML for Customer segmentation and Lifetime value prediction**

Customer segmentation, churn prediction and customer lifetime value prediction are the main challenges faced by any marketer. Businesses have a huge amount of marketing relevant data from various sources such as email campaign, website visitors and lead data. Using data mining and machine learning, an accurate prediction for individual marketing offers and incentives can be achieved. Using ML, savvy marketers can eliminate guesswork involved in data-driven marketing. For example, given the pattern of behavior by a user during a trial period and the past behaviors of all users, identifying chances of conversion to paid version can be predicted. A model of this decision problem would allow a program to trigger customer interventions to persuade the customer to convert early or better engage in the trial.

1. **Use ML for predictive maintenance for data from IOT sensors**

Build an an ML architecture for predictive maintenance, which consists of historical device data, flexible analysis environment, workflow visualization tool and operations feedback loop . In order to predict future failures, ML algorithm need to learn the relationship between sensor value and changes in sensor values to historical failures.

1. Recommendation engine?