ProTech Professional Technical Services, Inc.

Machine Learning for Lawyers (Understanding)

Course Summary

Description

This course is intended for lawyers, legal support, and IT. Its goal is to explain the capabilities and limitations of ML. No coding is required, but the labs and exercises will assure that the attendants will grasp and retain the major principles and ideas.

The course maintains an optimal balance of theory and practice. For each machine learning concept, we first discuss the foundations, its applicability, and limitations. Then we explain the implementation and use, and specific use cases

Objectives

After taking this course, students will be able to:
- Attain thorough understanding of popular machine learning algorithms, their applicability, and limitations
- Practice the application of these methods with the tools of choice
- Achieve clarity in the real-world use of machine learning by illustrating each method with practical use cases

Topics

- Introduction
- Classification
- Linear regression
- Naive Bayes
- Decision Trees
- LDA
- Deep Learning and AI

Audience

This course is designed for Lawyers, legal support and IT students.

Prerequisites

Computer literacy, such as using MS Office

Duration

One Day

Course Outline

I.   Introduction
     A.   Goals and capabilities of Machine Learning
     B.   Machine learning: goals, types, results
     C.   What is meant by "training the model"?

II.   Classification
     A.   Predicting categories
     B.   Logistic regression
     C.   Document classification
     Lab: Building document classifier

III.   Linear regression
     A.   Predicting a number
     B.   Use cases for nalyzing your business
     Lab: predicting the size of a case

IV.   Naive Bayes
     A.   Assigning probabilities to an outcome
     B.   Filtering out irrelevant documents
     Lab: spam filtering

V.   Decision Trees
     A.   How to answer a few 'yes' or 'no' questions to arrive at a decision
     Lab: predicting case outcome

VI.   LDA ◦Making sense of your documents
     A.   Topic modeling with LDA
     Lab: find major concerns in the document set

VII.   Deep Learning and AI ◦Automatic translation, face recognition, self-driving cars
     A.   How AI can be applied to specific cases
     Lab: use document understanding model