

# CONSTRUCTING INTELLIGENCE

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## About the data

Thanks to Procore's database, we are able to extract large amounts of valuable data needed to do machine learning. We primarily used their Submittals tool and Observations tool to make our predictions.

What is a submittal? Submittals are required primarily for the architect and engineer to verify that the correct products and quantities will be installed on the project in compliance with the design documents/contract documents. This information allows us to see if a project will be on schedule based on its approval date.

What is an observation? An observation is an indication of a hazard or defect on a project, made by any worker on the jobsite, usually the foreman. Together, the data from these tools will help the construction industry become more efficient.

## Overview

Construction is a very challenging field to work in. These individuals are responsible for creating the safe places we go to school, work, and live in. Building a successful project isn't just a walk in the park. They can encounter numerous drawbacks and challenges such as work accidents or even a delay in product shipment. Safety and staying on schedule are very important to a triumphant construction project. With our product, we are able to predict a construction company's project progress and safety allowing them to save money and time.



## Problem

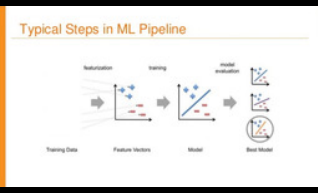
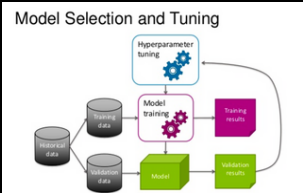
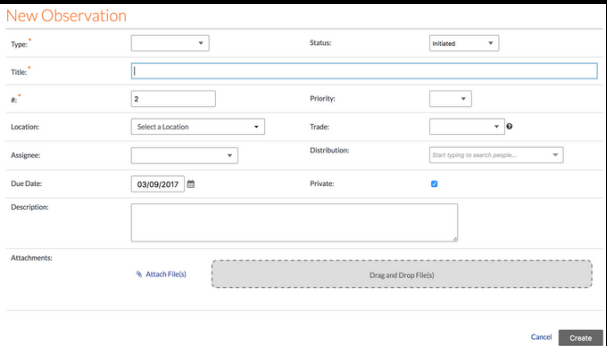
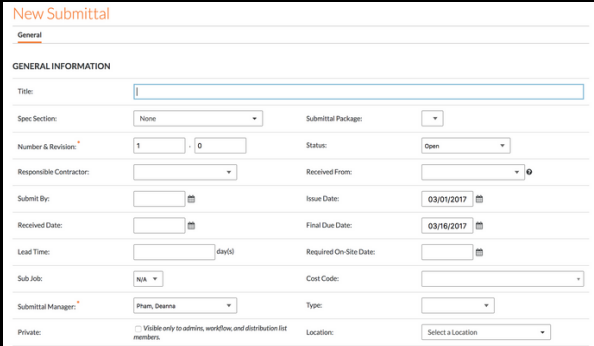


Two major issues in the construction industry are being able to finish a project on time and the safety aspect of a construction site.

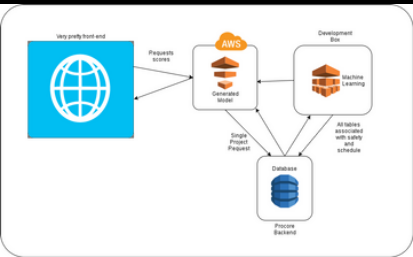


## Solution

Working with Procore's database, we were able to extract important features\*, create additional, needed data, and preprocess it. Once the normalization of information was complete, we used python libraries such as sklearn to train a model. The road to obtaining our solution consisted of a lot of trial and error. However, by trying various models provided by sklearn, we were able to obtain fairly accurate scores for the company projects that are associated with Procore.

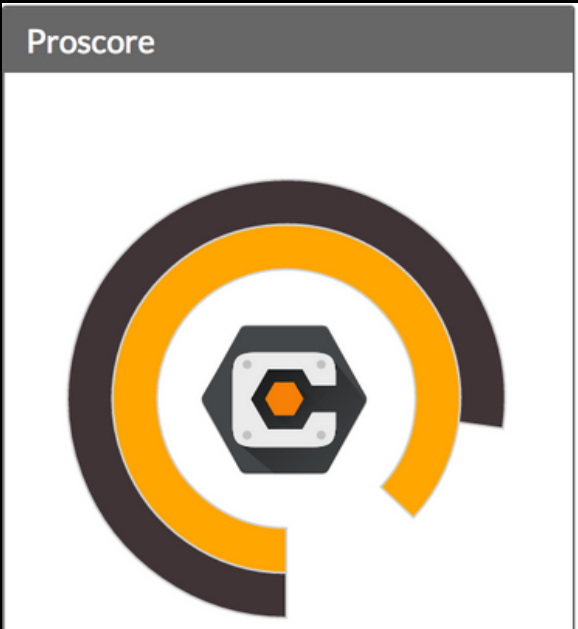
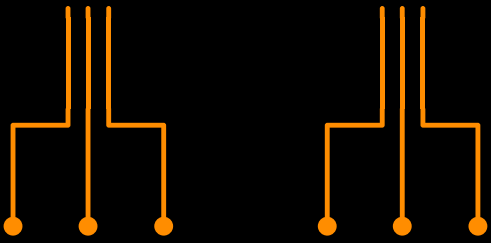


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## Proscore

A proscore is a unique, quantitative, predictive score that is given a project based on its safeness and progress.



## Interface

Our chrome extension is our way of telling the company in a quantitative way how they are doing on schedule and how safe their project is.

