PredictionIO

Machine Learning is.... computers learning to predict from data





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What is **PredictionIO**?

- An open source machine learning server
- For software developers to create predictive features in their web and mobile apps
- Handle dynamic gueries in real-time
- DASE framework
 - Separation of Concerns
 - Code maintainability, re-usability
 - Developer productivity
- Currently powering thousands of developers and hundred of applications





The Resolve Digital Blog

How a Simple Recommendation **Engine Boosts Revenue** over 70%



By Barry Harrison Posted on August 18, 2014

United Cellars is an award-winning online wine retailer based in Australia. Their site is built on the Spree Commerce platform and supported by a well-trained telemarketing team. We proposed that a recommendation engine would improve the visitor experience and increase conversions, so we set up an A/B test to find out.

PredictionIO

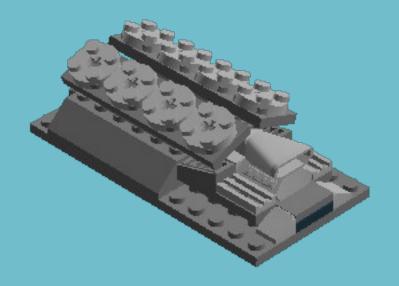
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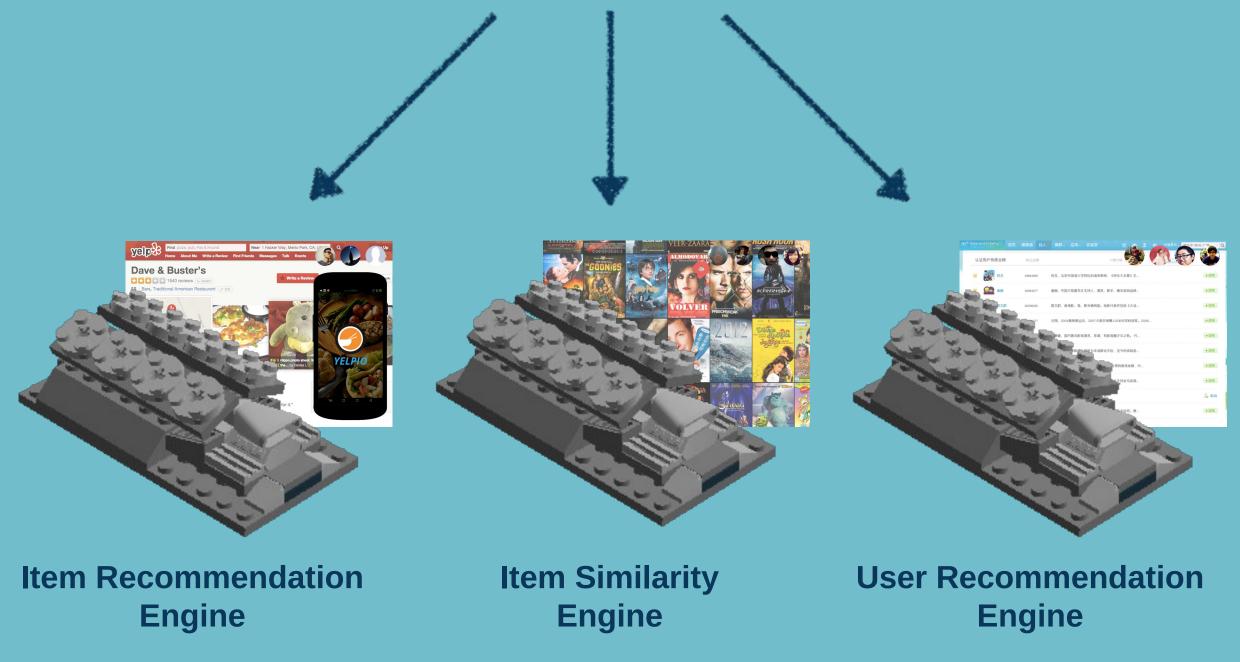
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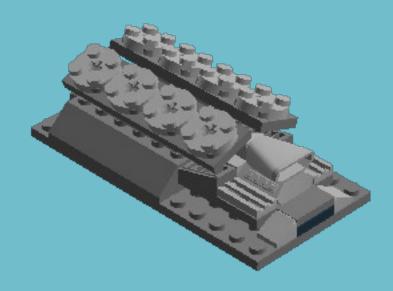


An Engine Template is the basic skeleton of an engine



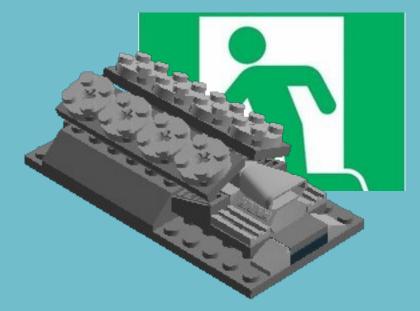
Recommendation Engine Template (MLlib ALS)





Classification Engine Template (MLlib Naive Bayes)





Churn Prediction Engine



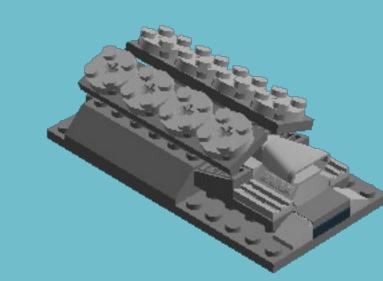


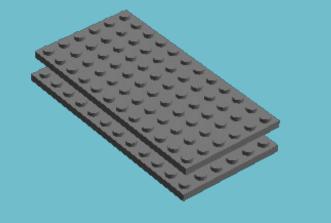
Sentiment Analysis Engine

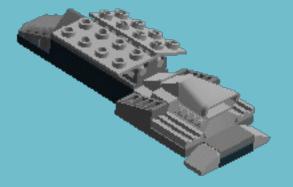












Data

Data Source reads data from a source (e.g., Database, Text file) and prepares the Training Data.

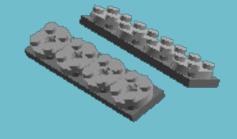
Data Preparator

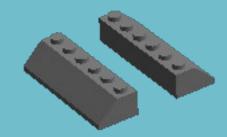
takes the *Training* Data and generates Prepared Data.

Algorithm

Algorithm takes Prepared Data to train a Model which is used to make *Prediction* outputs based on input Query.

An **Engine** represents a type of Machine Learning task, e.g. Recommendation







Serving

Serving serves the input *Query* and Prediction output.

Evaluation

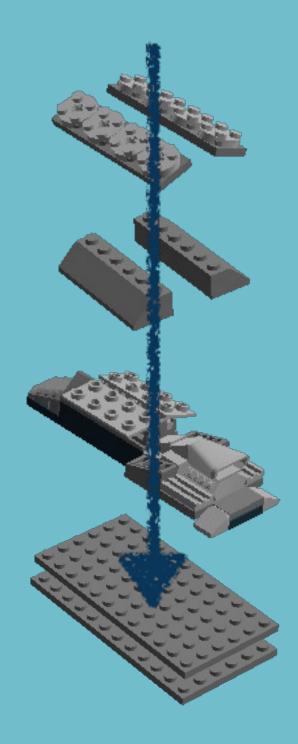
Evaluation Metrics

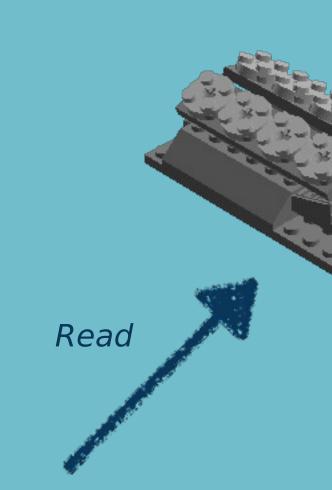
is used to evaluate the Engine based upon Test Data and by comparing the *Prediction* output with the Actual result





pio build

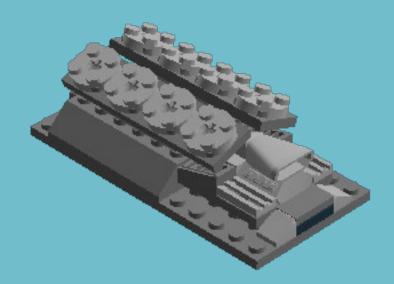




pio train

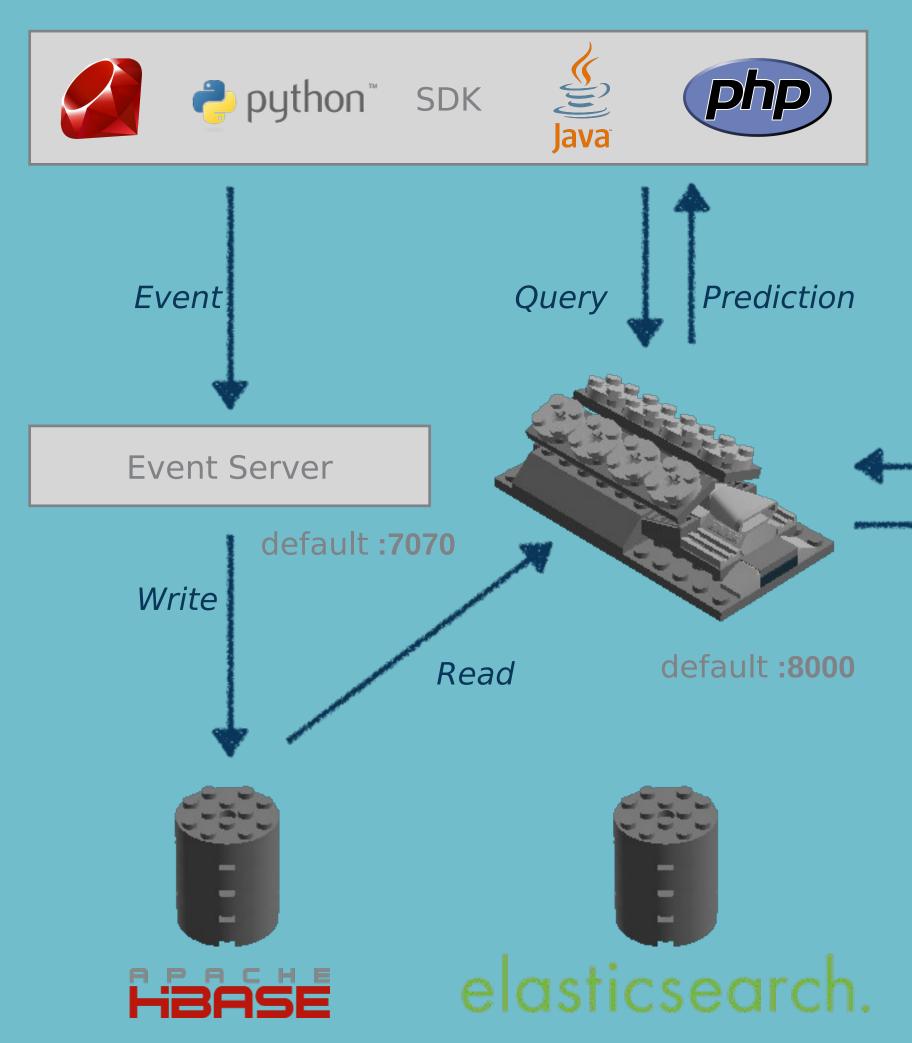
pio deploy











default **:9200**



default :8080





Recommendation Engine Template

https://github.com/PredictionIO/template-scala-parallel-recommendation

http://templates.prediction.io/PredictionIO/template-scala-parallel-recommendation





http://prediction.io **@PredictionIO** github.com/predictionio paul@prediction.io



