Twitter Sentiment Analysis

An activator tutorial powered by

Topics

What is it?

Who would want to use it and why?

Let's have a look

Future of the template

What is it?

An activator tutorial designed to show how to leverage the Lightbend Stack and build a machine learning application with a real world example.

A two-part project

1. An activator tutorial
2. Twitter Sentiment Analysis

Activator

Activator is the Lightbend Reactive Platform's build and tutorial tool

Comes with a web UI to explore, build, run and test projects

Activator tutorial

A template that contains a detailed explanation about how the project works

Twitter Sentiment Analysis

Web application that let's you search for tweets and automatically classifies these messages as either positive or negative with respect to the query term you've entered.

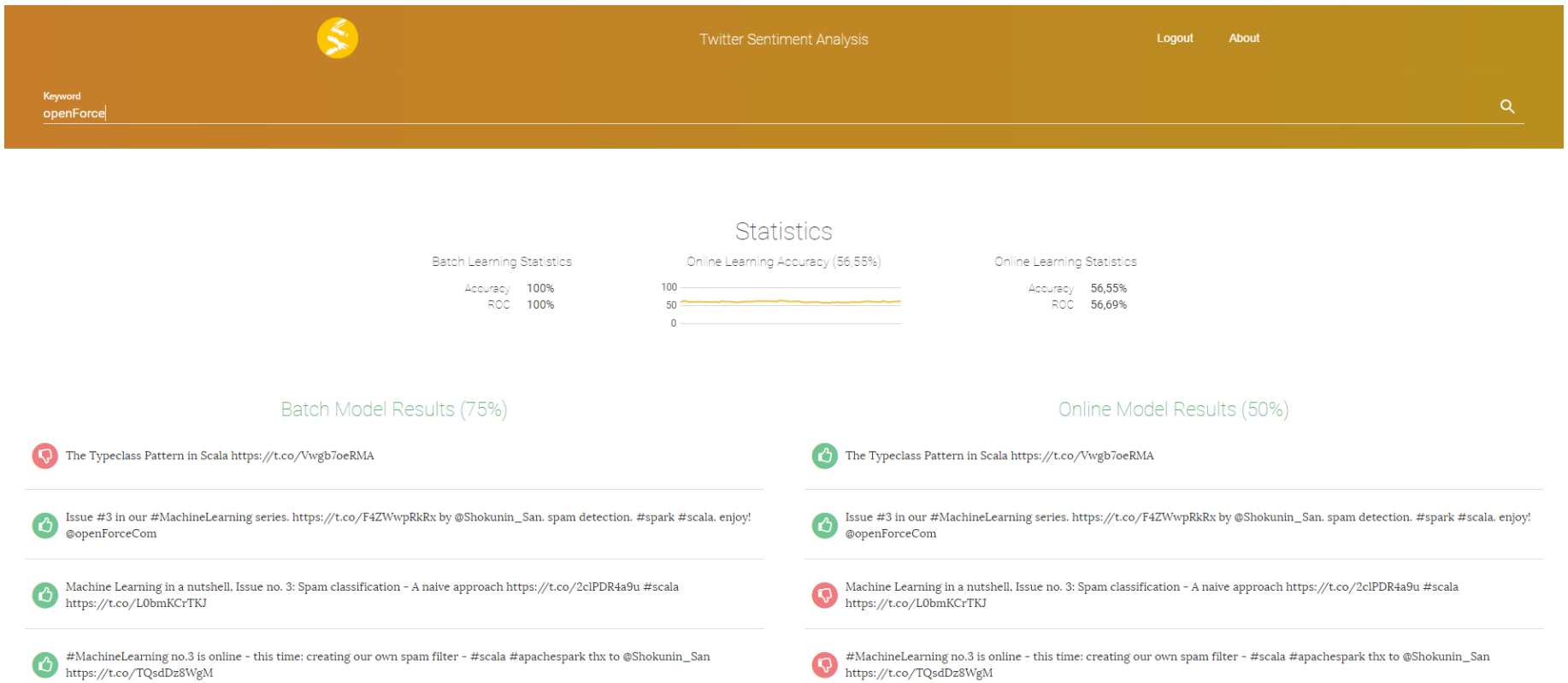
Functionality

1. Fetch twitter messages based on a given keyword
2. Preprocess each tweet
3. Apply an algorithm to determine the sentiment
   - Classic supervised learning (batch trainer)
   - Distant supervision (online trainer)

Compare two different approaches

Batch Trainer (classic supervised learning)
Online Trainer (distant supervision)

What does it look like?



Who would want to use it and why?

- Users who want to research the sentiment of products before purchase
- Companies that want to monitor the public sentiment of their brands
  - Gather feedback about newly released products (or upgrades)
  - Automatic shitstorm detection
- Governments to make better decisions (FuPol)

Let's have a look

- Install Activator
- Clone https://github.com/openforce/spark-mllib-scala-play/tree/develop
- `activator ui`

What's to come?

- Performance improvements
- Dependency upgrades (e.g. from Spark 1.5.2 → 2.0)
- New algorithms
  - Recursive Neural Tensor Network by Socher
  - Long short-term memory

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References

Technologies

- Akka
- Apache Spark
- Play Framework
- Polymer
- Scala

Papers etc.

- A Few Useful Things to Know about Machine Learning (Domingos, 2012)
- Twitter Sentiment Classification using Distant Supervision
- FUPOL