



PROJECT SPECIFICATION

Deploying a Sentiment Analysis Model

Files Submitted

CRITERIA	MEETS SPECIFICATIONS
Submission Files	The submission includes all required files, including notebook, python scripts and html files.

Preparing and Processing Data

CRITERIA	MEETS SPECIFICATIONS
Question: What does <code>review_to_words</code> do?	Answer describes what the pre-processing method does to a review.
Create a word dictionary	The <code>build_dict</code> method is implemented and constructs a valid word dictionary.
Question: What are the five most frequently appearing words?	Notebook displays the five most frequently appearing words.

CRITERIA	MEETS SPECIFICATIONS
Question: Understanding <code>preprocess_data</code> and <code>convert_and_pad_data</code>	Answer describes how the processing methods are applied to the training and test data sets and what, if any, issues there may be.

Build and Train the PyTorch Model

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Writing the training method	The train method is implemented and can be used to train the PyTorch model.
Training the model	The RNN is trained using SageMaker's supported PyTorch functionality.

Deploy the Model for Testing

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Deploy the trained model	The trained PyTorch model is successfully deployed.

Use the Model for Testing

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Question: How does this model compare to the XGBoost model?	Answer describes the differences between the RNN model and the XGBoost model and how they perform on the IMDB data.
Process the test review	The test review has been processed correctly and stored in the <code>test_data</code> variable.
Writing inference code	The <code>predict_fn()</code> method in <code>serve/predict.py</code> has been implemented.

Deploying the Web App

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The web app is deployed	The model is deployed and the Lambda / API Gateway integration is complete so that the web app works (make sure to include your modified <code>index.html</code>).
Question: Give an example review and response	Answer gives a sample review and the resulting predicted sentiment.

Suggestions to Make Your Project Stand Out!

(1) MAKE A BETTER WEB APP

The web app that you make in this project simply reports to the user whether the predicted sentiment was positive or negative. Can you think of a better web app that uses the same model?

(2) IMPROVE THE WEB APP APPEARANCE

The provided web app is very simple and there is plenty of room for improvement if you wish to stretch your web developer skills.

(3) IMPROVE THE MODEL

The model chosen here is a straightforward RNN with a single hidden layer. There are many different model architectures that you could try to see if they improve the results.