

# **IBM Training**

Watson Studio AI Services  
Integration  
Hands-On Lab-8

Natural Language Classifier  
Service

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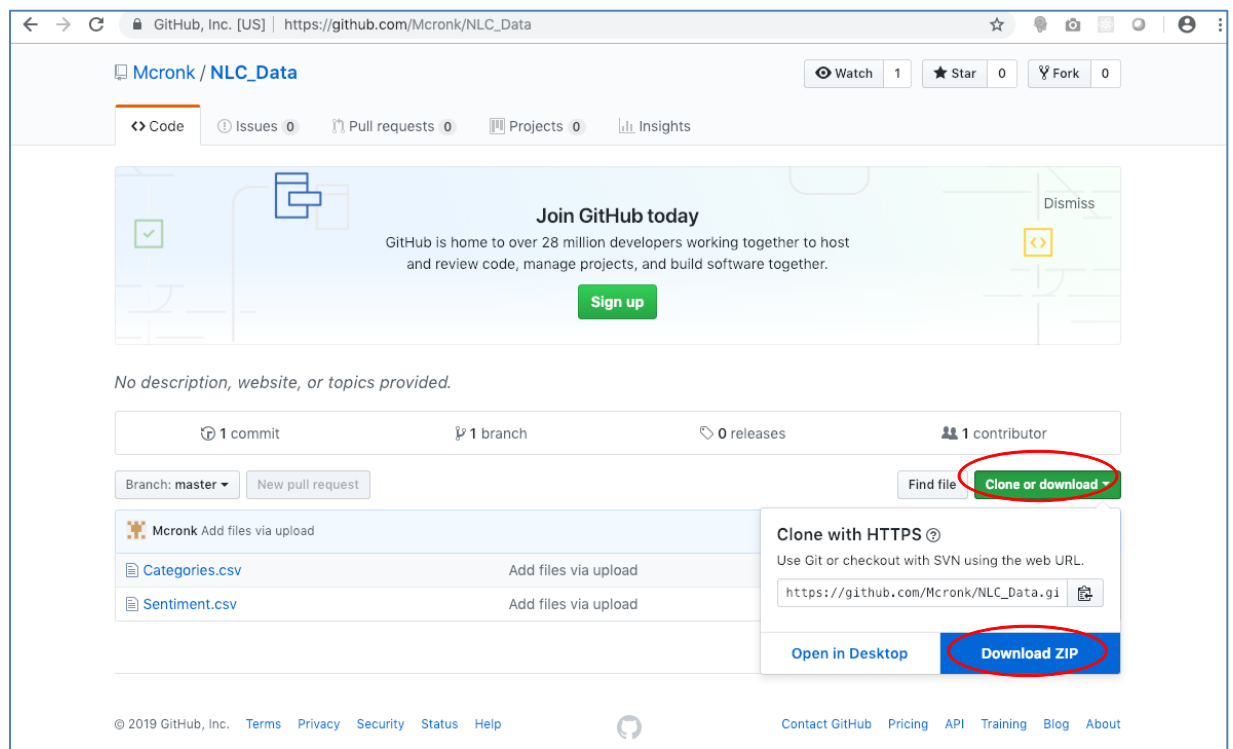
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# Lab-8: Configure a Natural Language Classifier Service in Watson Studio

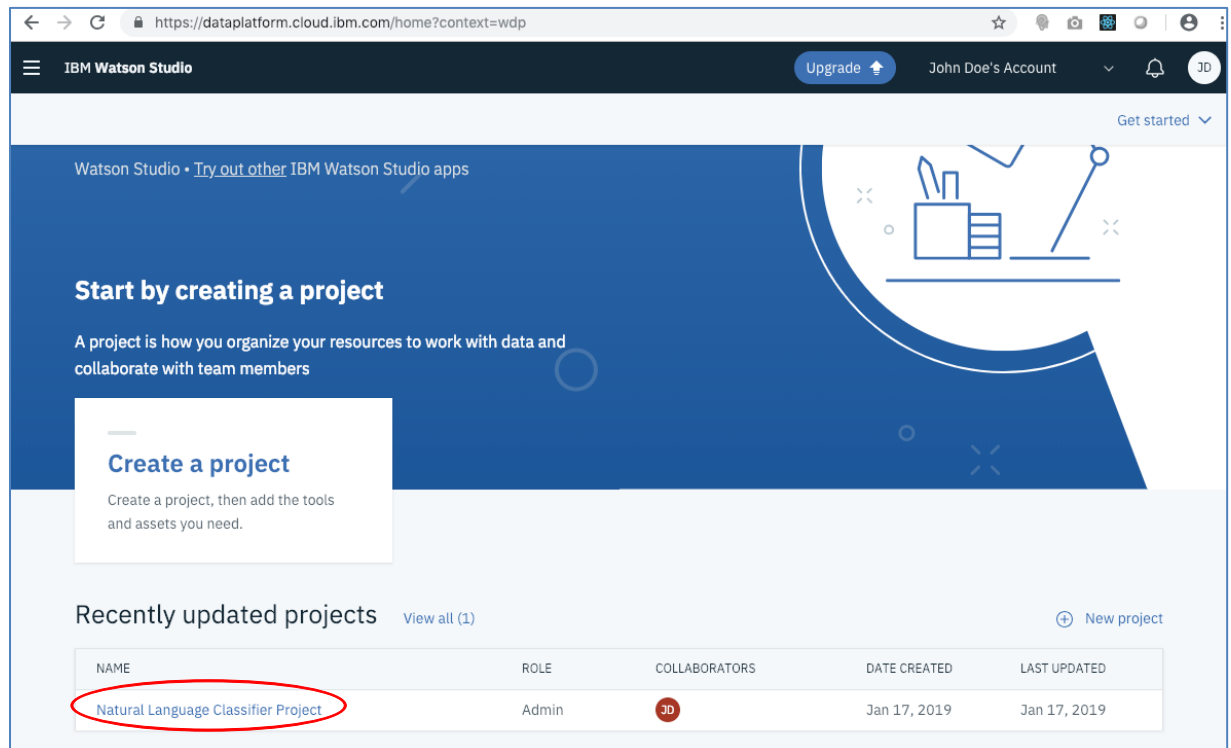
This lab guide is intended to provide you with hands-on experience in using the Watson AI Natural Language Classifier service in the Watson Studio data science platform.

1. Open Firefox or Chrome and navigate to [https://github.com/Mcronk/NLC\\_Data](https://github.com/Mcronk/NLC_Data)
2. Click on “Clone or download” and “Download ZIP”



3. Unzip the zip file on your Desktop.
4. Click on the Watson Studio browser tab.

5. Click on your Watson Studio project. Note, the project name will be different than shown below.



IBM Watson Studio

Upgrade John Doe's Account

Get started

Watson Studio • Try out other IBM Watson Studio apps

### Start by creating a project

A project is how you organize your resources to work with data and collaborate with team members

#### Create a project

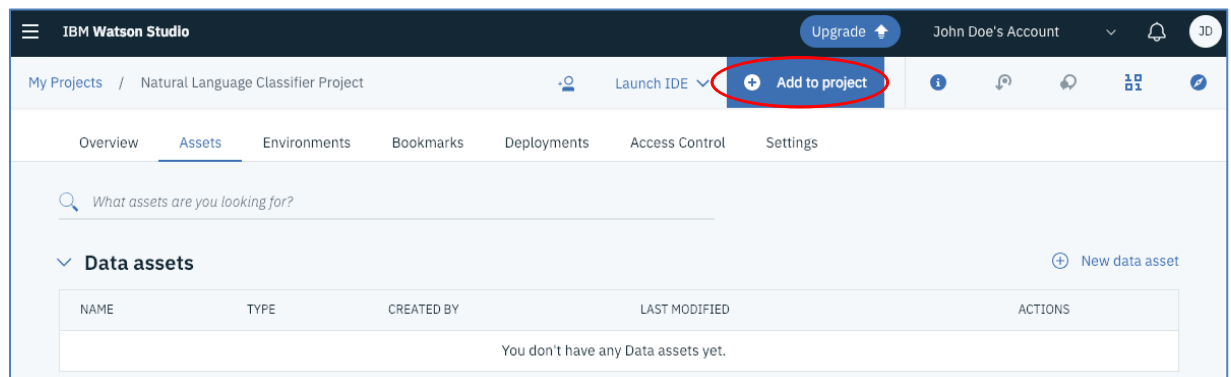
Create a project, then add the tools and assets you need.

#### Recently updated projects

[View all \(1\)](#)[+ New project](#)

NAME	ROLE	COLLABORATORS	DATE CREATED	LAST UPDATED
Natural Language Classifier Project	Admin	JD	Jan 17, 2019	Jan 17, 2019

6. Click on “Add to project”



IBM Watson Studio

Upgrade John Doe's Account

My Projects / Natural Language Classifier Project

Launch IDE

+ Add to project

Overview Assets Environments Bookmarks Deployments Access Control Settings

What assets are you looking for?

#### Data assets

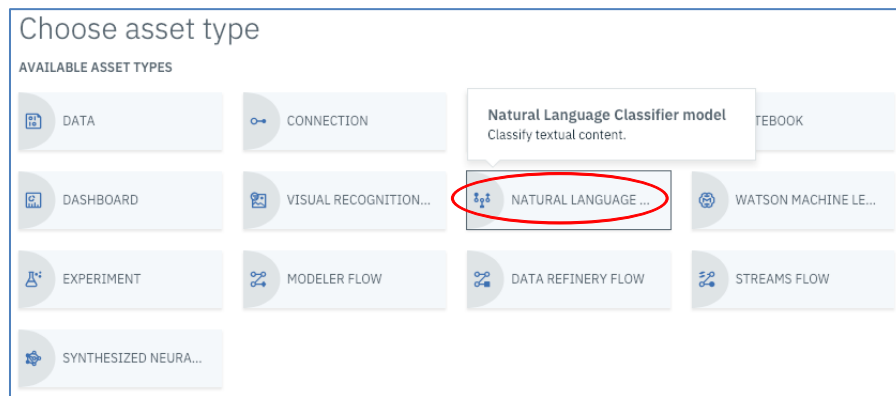
[+ New data asset](#)

NAME	TYPE	CREATED BY	LAST MODIFIED	ACTIONS
You don't have any Data assets yet.				

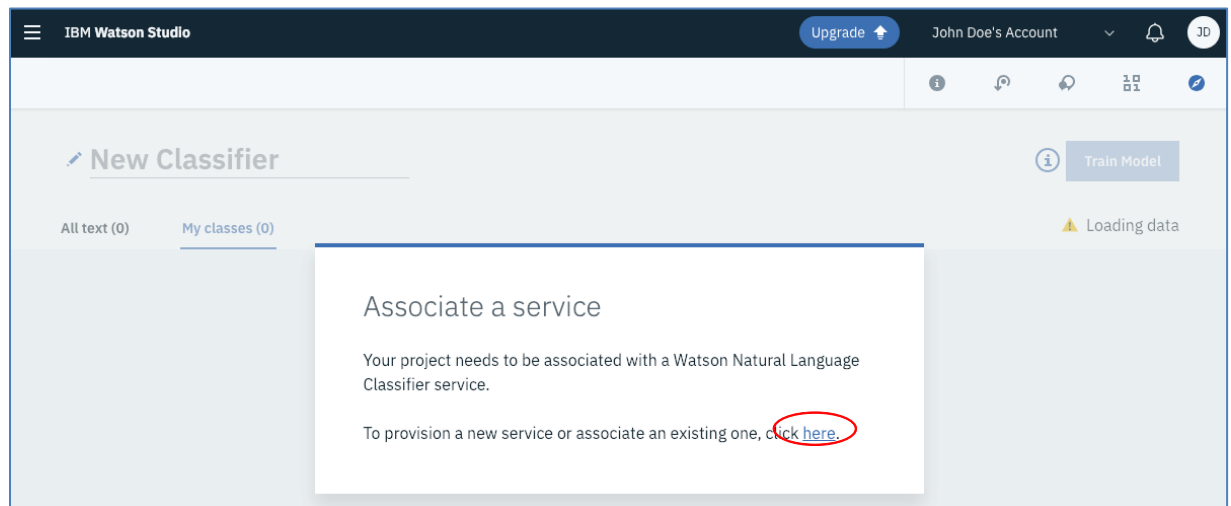
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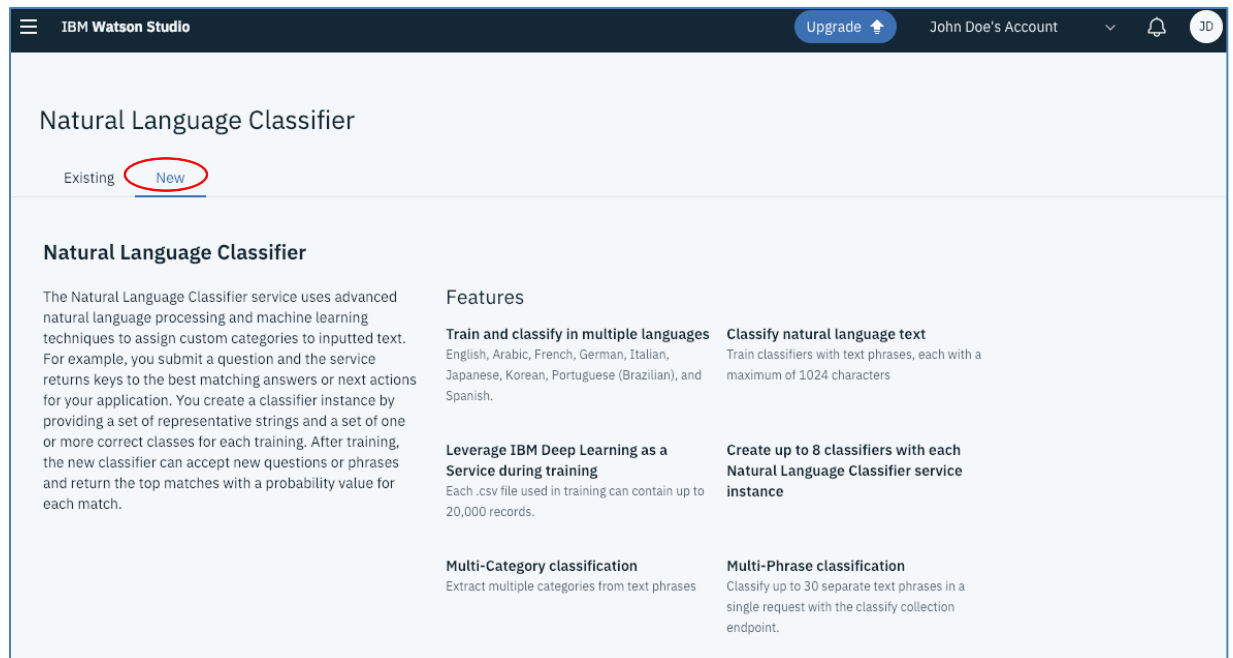
7. Click on Natural Language Classifier Model



8. You will be prompted to create or associate a new Natural Language Classifier Service. Click on the blue link to provision a new service.



9. You will be brought to a page to either associate an existing service or provision a new one. Ensure that the “New” tab is selected.



The screenshot shows the IBM Watson Studio interface. At the top, there's a navigation bar with the IBM Watson Studio logo, an 'Upgrade' button, and a user profile for 'John Doe's Account'. Below the navigation bar, the main heading is 'Natural Language Classifier'. Under this heading, there are two tabs: 'Existing' and 'New'. The 'New' tab is selected and circled in red. Below the tabs, there's a section titled 'Natural Language Classifier' with a descriptive paragraph. To the right of this paragraph, there's a 'Features' section with four items, each with a title and a brief description.

**Natural Language Classifier**

Existing **New**

**Natural Language Classifier**

The Natural Language Classifier service uses advanced natural language processing and machine learning techniques to assign custom categories to inputted text. For example, you submit a question and the service returns keys to the best matching answers or next actions for your application. You create a classifier instance by providing a set of representative strings and a set of one or more correct classes for each training. After training, the new classifier can accept new questions or phrases and return the top matches with a probability value for each match.

**Features**

- Train and classify in multiple languages**  
English, Arabic, French, German, Italian, Japanese, Korean, Portuguese (Brazilian), and Spanish.
- Classify natural language text**  
Train classifiers with text phrases, each with a maximum of 1024 characters
- Leverage IBM Deep Learning as a Service during training**  
Each .csv file used in training can contain up to 20,000 records.
- Create up to 8 classifiers with each Natural Language Classifier service instance**
- Multi-Category classification**  
Extract multiple categories from text phrases
- Multi-Phrase classification**  
Classify up to 30 separate text phrases in a single request with the classify collection endpoint.

10. Scroll down, click on the Standard Plan. You will not be charged when running a free account.

11. Click Create.

The screenshot shows the IBM Watson Studio interface. At the top, there's a navigation bar with the IBM Watson Studio logo, an 'Upgrade' button, and a user profile 'John Doe's Account'. Below the navigation bar, there are several service cards: 'Natural Language Classifier service instance', 'Multi-Category classification', and 'Multi-Phrase classification'. A 'Pricing Plan' section indicates the monthly process shown above reflects the 'United States'. Below this is a table with three columns: PLAN, FEATURES, and PRICING. The 'Standard' plan is selected and highlighted with a red circle. The features for the Standard plan include 1 Natural Language Classifier free per month, 1000 API calls free per month, and 4 Training Events free per month. The pricing is \$20 USD/Classifier per month, \$0.0035 USD/ API call, and \$3 USD/ Training Event. At the bottom right, there are 'Cancel' and 'Create' buttons, with the 'Create' button highlighted by a red circle.

PLAN	FEATURES	PRICING
<b>Standard</b>	<b>1 Natural Language Classifier free per month.</b> 1000 API calls free per month 4 Training Events free per month	\$20 USD/Classifier per month \$0.0035 USD/ API call \$3 USD/ Training Event

You will be charged per API call, per Classifier, and per training event

Cancel **Create**

12. Keep the default settings and click Confirm.

## Confirm Creation

Region

US South

Plan

Standard

Resource group

Default

Service name

natural-language-classifier-wq

\$3 USD/ Training Event

Cancel

Confirm

13. You will be brought to the page to configure your Natural Language Classifier service.

14. Click on Browse.

IBM Watson Studio

Upgrade

John Doe's Account

JD

Projects / Natural Language Classifier Project / New Classifier

New Classifier

Train Model

All text (0)

My classes (0)

At least 1 class required

Search classes

Create a class

1. Upload to project

To add files to your project, drop a valid .csv or .txt file here.

Browse

2. Add from project

Drag .csv or .txt files from your project to the training area to add them to your model.

0 selected

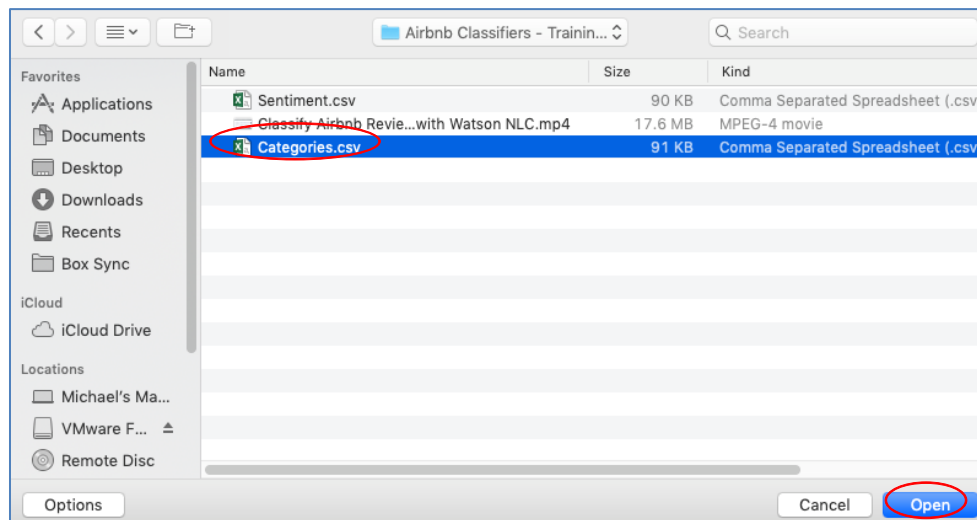
There are no .csv or .txt files in your project.

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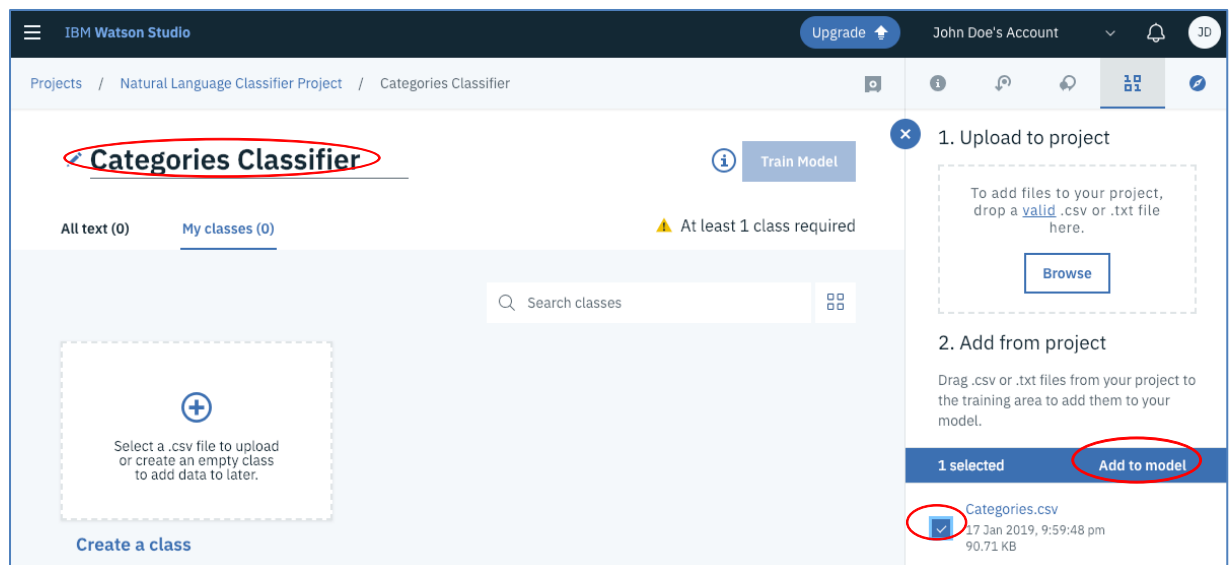
15. Click on Categories.csv and then click Upload.



16. Click on “New Classifier” in the top left and rename to “Categories Classifier”

17. Click on the checkbox in the bottom right by Categories.csv

18. Click on Add to model.

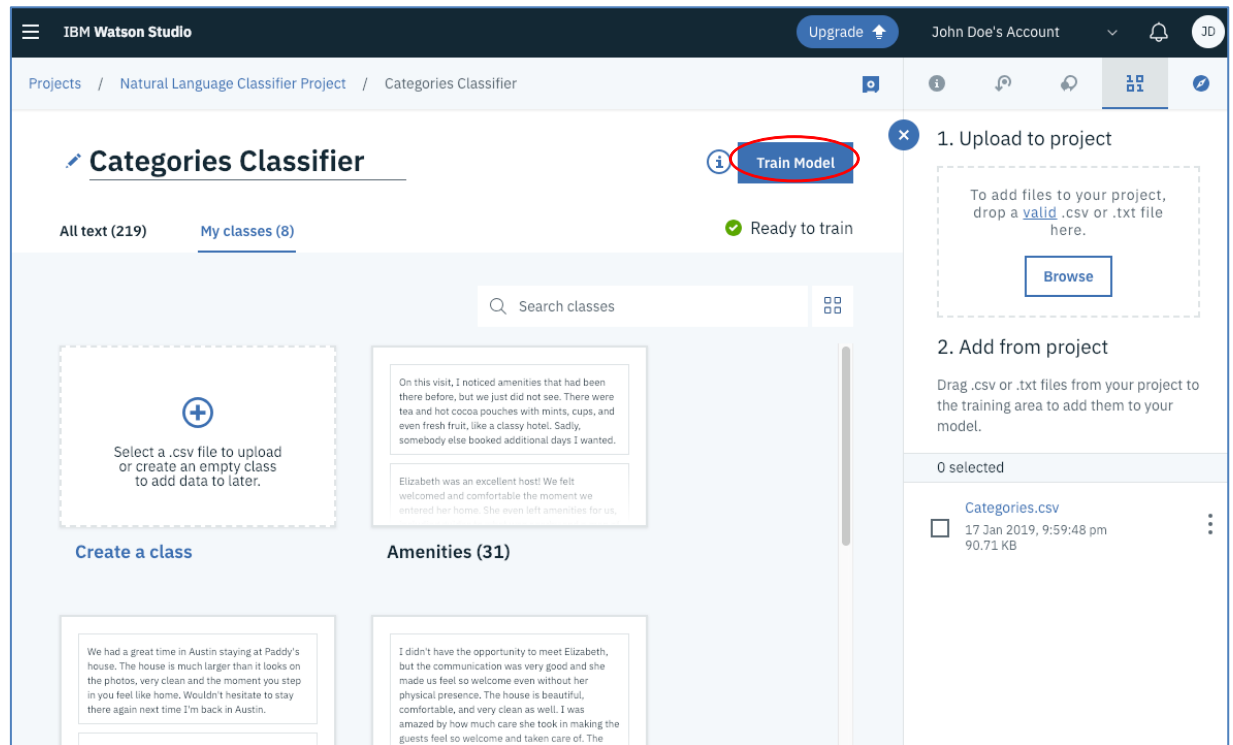


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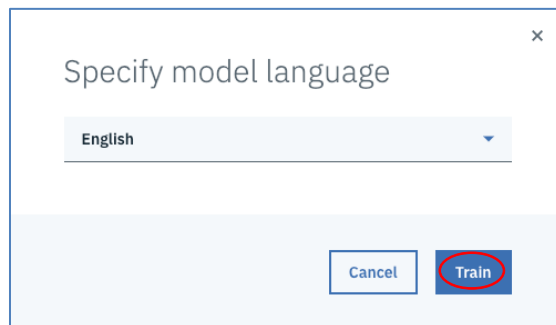
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19. Your classes should now be populated.

20. Click on Train Model.



21. Click Train.



22. Model training will generally take 5-10 minutes. This is a create time to grab coffee.

23. Once the model is trained, click the link to test your model.

The screenshot displays the IBM Watson Studio web interface. At the top, a dark blue header bar contains the 'IBM Watson Studio' logo, an 'Upgrade' button, and the user's account information 'John Doe's Account'. Below the header, a breadcrumb trail shows the navigation path: 'Projects / Natural Language Classifier Project / Categories Classifier / Edit and retrain'. A green notification banner at the top of the main content area states: 'Training successful Your model training was successful. Click [here](#) to view and test your model.' The main content area is titled 'Categories Classifier' and features a 'Train Model' button. Below the title, there are two tabs: 'All text (219)' and 'My classes (8)'. The 'My classes (8)' tab is active, showing a search bar labeled 'Search classes' and a list of three classes. The first class is 'Create a class' with a plus icon and instructions to upload a .csv file. The second class is 'Amenities (31)' with a sample text snippet. The third class is 'Cleanliness (26)' with another sample text snippet. A 'Trained' status indicator is visible in the top right corner of the main content area.

24. Click on the Test tab. Your classifier is now able to classify sets of text based on examples of Airbnb reviews that discussed amenities, cleanliness, etc. This is a broad capability that can be applied to automatically classify sets of text for any category that data is available for.

The screenshot shows the 'Categories Classifier' page in IBM Watson Studio. The 'Overview' tab is selected, and the 'Test' tab is circled in red. The page displays a summary table with the following data:

Summary	
Model ID	db5342x491-nlc-2252
Status	Available
Explanation	The classifier instance is now available and is ready to take classifier requests.
Created on	1/17/2019, 10:05:26 PM
Language	English
Number of classes	8
Number of text examples	219

25. Enter text into the text box and click Classify.

The screenshot shows the 'Categories Classifier' page in IBM Watson Studio, with the 'Test' tab selected. The 'Filter' section on the left shows a 'Threshold' slider set to 0.0 and a 'Class' dropdown. The main text box contains the text: 'David's place was everything I expected and more! The apartment was so cool and decorated with things'. The 'Classify' button is circled in red.

Natural language classifier can be trained for additional models, deployed as an external service with exposed APIs, or used to process data in notebooks and flow models.