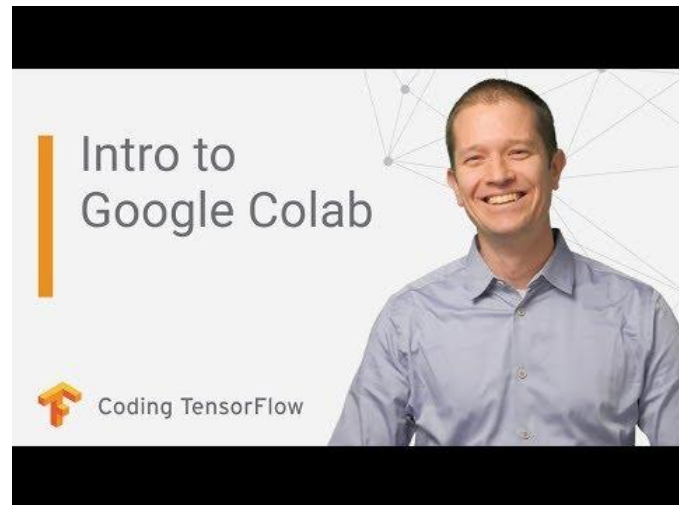


# What is Google Colab?



- An executable document where you can write, run, and share code within Google drive
- Connects to a cloud-based machine
  - Allows you to execute Python without installing anything
- Easily exports to GitHub
- Compatible with jupyter notebook



# Special Features



- Most marketable feature - working on the cloud / don't have to install
- Easy to share and compatible with other notebooks
- Has a “search code snippets” feature to help with your project

Code snippets

Filter code snippets

Using BigQuery with Pandas API →

Visualization: Bar Plot in Altair →

Visualization: Histogram in Altair →

Visualization: Interactive Brushing in Altair →

Visualization: Interactive Scatter Plot in Altair →

Visualization: Histogram in Altair

Altair provides a variety of aggregation operations in order to build custom histograms. Here is a simple example

```
# load an example dataset
from vega_datasets import data
cars = data.cars()

# plot the dataset, referencing dataframe column names
import altair as alt
alt.Chart(cars).mark_bar().encode(
    x=alt.X('Miles_per_Gallon', bin=True),
    y='count()',
)
```

[View source notebook](#)

- Colab is stored in standard Jupyter Notebook format, therefore has many similarities
  - Shift + enter to run code
  - Use markdown to add notes
  - Easily import data sets
  - Save/load from Github
  - Data science tools (matplotlib, numpy)

# Differences to Jupyter



- Using languages other than Python in Google is not an easy process compared to Jupyter
- The cloud allows people to collaborate on the same document at one time
- Can run in “playground mode”



nonsense code



```
Error in parse(text = x, srcfile = src): <text>:1:10: unexpected symbol  
1: nonsense code  
      ^
```

Traceback:

SEARCH STACK OVERFLOW

**If you have an error in your code, there is a quick “search” button to help you solve the problem**

- Where might you use this instead of Jupyter? If you...
  - ...know you'll only be working in Python / R
  - ...will be collaborating with a team
  - ...need some practice with the coding (playground mode)
- Do I recommend Google Colab?
  - Yes - easy to collaborate with others, share your work, import data directly from your Google Drive, saves automatically, easier to push to github
- For more info, check out the following links!
  - [Frequently Asked Questions](#)
  - [Overview of Features](#)
  - [Getting Started](#)

# Example / Demo



[https://colab.research.google.com/drive/1untOxg\\_d5MsU-3txQndp-y\\_PAYP3qe-Q?  
usp=sharing](https://colab.research.google.com/drive/1untOxg_d5MsU-3txQndp-y_PAYP3qe-Q?usp=sharing)