



# Plot CSV Data in Python

How to create charts from csv files with Plotly and Python

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CSV or comma-delimited-values is a very popular format for storing structured data. In this tutorial, we will see how to plot beautiful graphs using csv data, and Pandas. We will learn how to import csv data from an external source (a url), and plot it using Plotly and pandas.

First we import the data and look at it.

```
import pandas as pd
df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2014_apple_stock.csv')
df.head()
```

	AAPL_x	AAPL_y
0	2014-01-02	77.445395
1	2014-01-03	77.045575
2	2014-01-06	74.896972
3	2014-01-07	75.856461
4	2014-01-08	75.091947

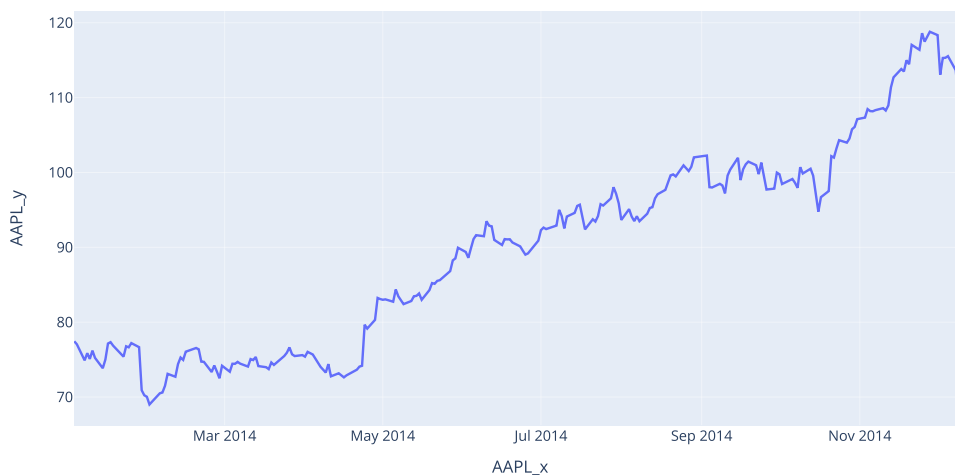
## Plot from CSV with Plotly Express

```
import pandas as pd
import plotly.express as px

df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2014_apple_stock.csv')

fig = px.line(df, x = 'AAPL_x', y = 'AAPL_y', title='Apple Share Prices over time (2014)')
fig.show()
```

Apple Share Prices over time (2014)



## Plot from CSV in Dash

[Dash \(https://plotly.com/dash/\)](https://plotly.com/dash/) is the best way to build analytical apps in Python using Plotly figures. To run the app below, run `pip install dash`, click "Download" to get the code and run `python app.py`.

Get started with [the official Dash docs \(https://dash.plotly.com/installation\)](https://dash.plotly.com/installation) and [learn how to effortlessly style \(https://plotly.com/dash/design-kit/\)](https://plotly.com/dash/design-kit/) & [deploy \(https://plotly.com/dash/app-manager/\)](https://plotly.com/dash/app-manager/) apps like this with [Dash Enterprise \(https://plotly.com/dash/\)](https://plotly.com/dash/).

```
from dash import Dash, dcc, html, Input, Output
import plotly.express as px
import pandas as pd

app = Dash(__name__)

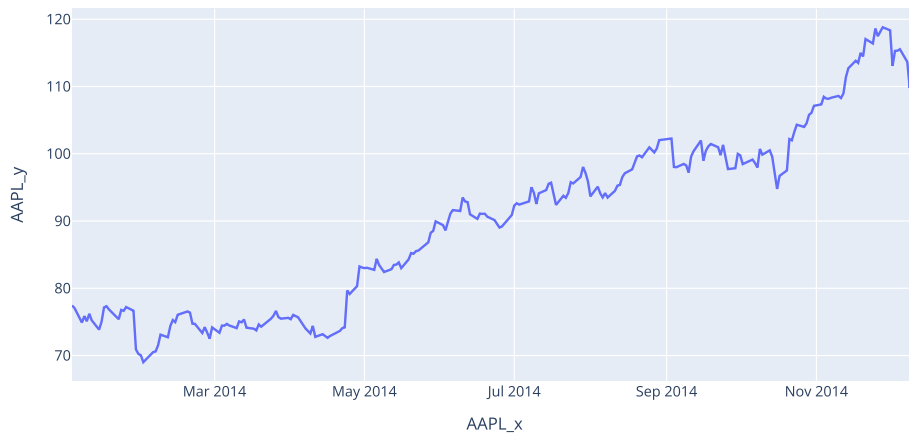
app.layout = html.Div([
    html.H4('Simple stock plot with adjustable axis'),
    html.Button("Switch Axis", n_clicks=0,
                id='button'),
    dcc.Graph(id="graph"),
])

@app.callback(
    Output("graph", "figure"),
    Input("button", "n_clicks"))
def display_graph(n_clicks):
    df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2014_apple_stock.csv') # replace with your own data source

    if n_clicks % 2 == 0:
        x, y = 'AAPL_x', 'AAPL_y'
    else:
        x, y = 'AAPL_y', 'AAPL_x'
```

[DOWNLOAD](#)

### Simple stock plot with adjustable axis

[SWITCH AXIS](#)

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## Plot from CSV with graph\_objects

```
import pandas as pd
import plotly.graph_objects as go

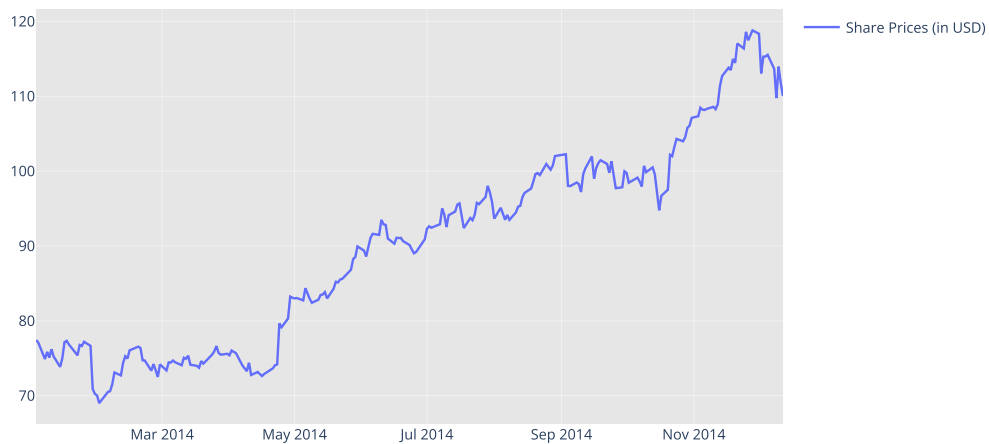
df = pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/2014_apple_stock.csv')

fig = go.Figure(go.Scatter(x = df['AAPL_x'], y = df['AAPL_y'],
                           name='Share Prices (in USD)'))

fig.update_layout(title=dict(text='Apple Share Prices over time (2014)',
                              plot_bgcolor='rgb(230, 230,230)',
                              showlegend=True))

fig.show()
```

Apple Share Prices over time (2014)



## Reference

See <https://plotly.com/python/getting-started> (<https://plotly.com/python/getting-started>) for more information about Plotly's Python API!

# What About Dash?

[Dash \(https://dash.plot.ly/\)](https://dash.plot.ly/) is an open-source framework for building analytical applications, with no Javascript required, and it is tightly integrated with the Plotly graphing library.

Learn about how to install Dash at <https://dash.plot.ly/installation> (https://dash.plot.ly/installation).


Everywhere in this page that you see `fig.show()`, you can display the same figure in a Dash application by passing it to the `figure` argument of the [Graph component](https://dash.plot.ly/dash-core-components/graph) (https://dash.plot.ly/dash-core-components/graph) from the built-in `dash_core_components` package like this:

```
import plotly.graph_objects as go # or plotly.express as px
fig = go.Figure() # or any Plotly Express function e.g. px.bar(...)
# fig.add_trace( ... )
# fig.update_layout( ... )

from dash import Dash, dcc, html

app = Dash()
app.layout = html.Div([
    dcc.Graph(figure=fig)
])

app.run(debug=True, use_reloader=False) # Turn off reloader if inside Jupyter
```



## Dash your way to interactive web apps.

No JavaScript required!

GET STARTED NOW


### My First App with Data, Graph, and Controls

pop

lifeExp

gdpPerCap

country	pop	continent	lifeExp	gdpPerCap
Afghanistan	31889923	Asia	43.828	974.5883384
Albania	3609523	Europe	76.423	5937.829525999999
Algeria	33333216	Africa	72.381	6223.367465
Angola	12420476	Africa	42.731	4707.231267
Argentina	40301927	Americas	75.32	12779.37964
Australia	20434176	Oceania	81.235	34435.367439999995
Austria	8199783	Europe	79.829	36126.4927
Bahrain	706573	Asia	75.635	29796.04834
Bangladesh	150448339	Asia	64.062	1761.253792
Belgium	10391226	Europe	79.441	33062.04908
Benin	8878314	Africa	56.728	1441.284873
Bolivia	9139532	Americas	65.554	3821.137884



(https://dash.plotly.com/tutorial?utm\_medium=graphing\_libraries&utm\_content=python\_footer)

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