

# Alignment Chart in Python

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## Alignment Viewer

The Alignment Viewer (MSA) component is used to align multiple genomic or proteomic sequences from a FASTA or Clustal file. Among its extensive set of features, the multiple sequence alignment viewer can display multiple subplots showing gap and conservation info, alongside industry standard colorscale support and consensus sequence. No matter what size your alignment is, Alignment Viewer is able to display your genes or proteins snappily thanks to the underlying WebGL architecture powering the component. You can quickly scroll through your long sequence with a slider or a heatmap overview.

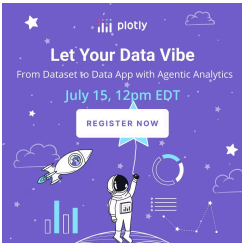
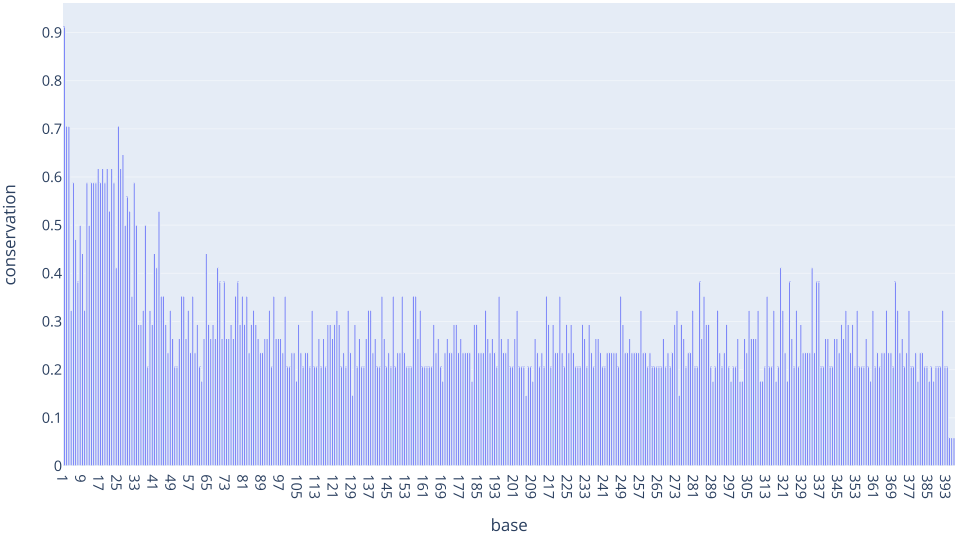
Note that the AlignmentChart only returns a chart of the sequence, while AlignmentViewer has integrated controls for colorscale, heatmaps, and subplots allowing you to interactively control your sequences.

## Bar Chart for conservation visualization

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

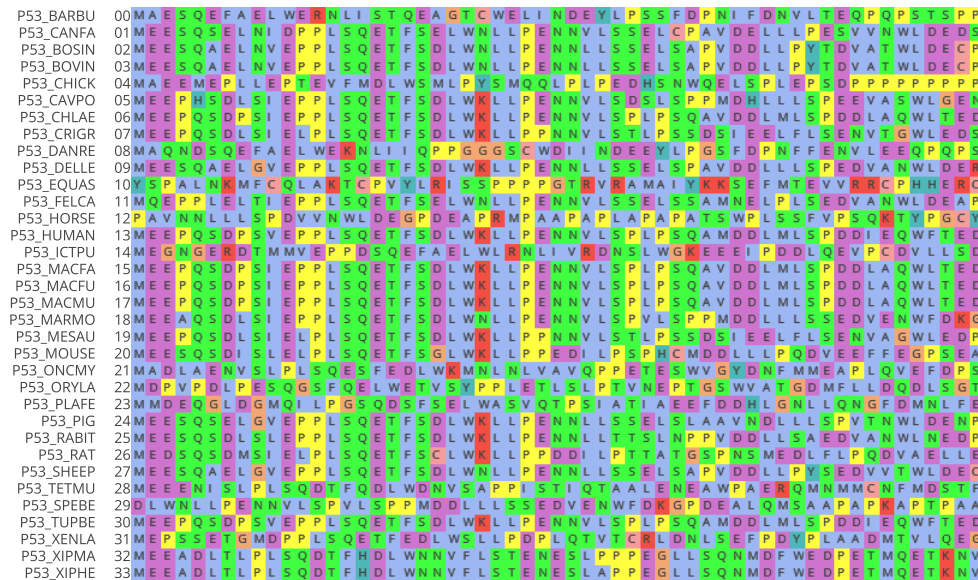
df = (pd.read_csv('https://raw.githubusercontent.com/plotly/datasets/master/Dash_Bio/Genetic/gene_conservation.csv')
      .set_index('0')
      .loc[['consensus', 'conservation']]
      .T
      .astype({"conservation": float}))

fig = px.bar(df, labels={'index': 'base' }, hover_name='consensus', y='conservation')
fig.show()
```



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DOWNLOAD



What About Dash?

Dash (<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>) from the built-in `dash_core_components` package like this:

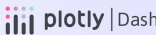
tion

```
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

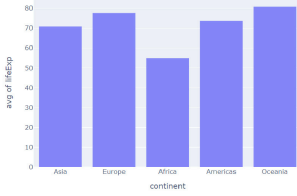
### My First App with Data, Graph, and Controls

pop

lifeExp

gdpPerCap

country	pop	continent	lifeExp	gdpPerCap
Afghanistan	31889923	Asia	43.828	974.5883384
Albania	3600523	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	36326.4927
Bahrain	706573	Asia	75.635	29796.04834
Bangladesh	150448339	Asia	64.062	1701.253792
Belgium	10391226	Europe	79.441	33062.04908
Benin	8878314	Africa	56.728	1441.284873
Bolivia	9139352	Americas	65.554	3821.137884



([https://dash.plotly.com/tutorial?utm\\_medium=graphing\\_libraries&utm\\_content=python\\_footer](https://dash.plotly.com/tutorial?utm_medium=graphing_libraries&utm_content=python_footer))

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