

```
!pip install ucimlrepo
```

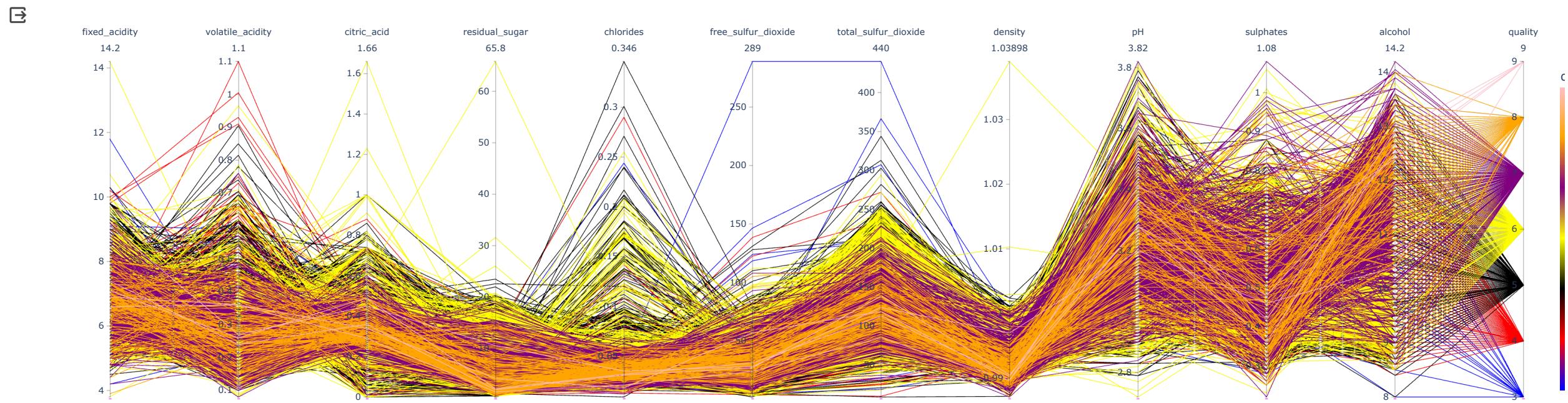
```
Collecting ucimlrepo
  Downloading ucimlrepo-0.0.3-py3-none-any.whl (7.0 kB)
Installing collected packages: ucimlrepo
Successfully installed ucimlrepo-0.0.3
```

```
from ucimlrepo import fetch_ucirepo
```

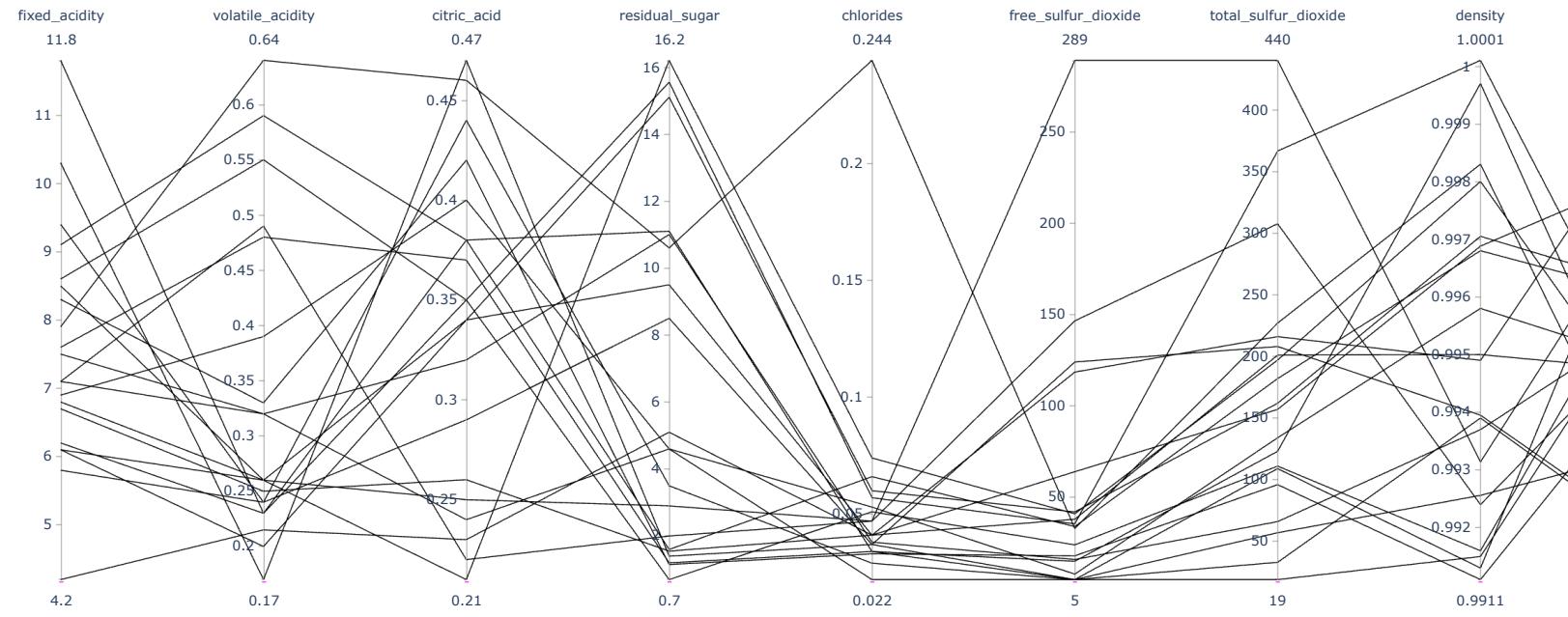
```
# fetch dataset
wine_quality = fetch_ucirepo(id=186)
wine_quality = wine_quality.data.original
```

```
three = wine_quality.loc[wine_quality['quality'] == 3]
nine = wine_quality.loc[wine_quality['quality'] == 9]
both = wine_quality.loc[(wine_quality['quality'] == 9) | (wine_quality['quality'] == 3)]
```

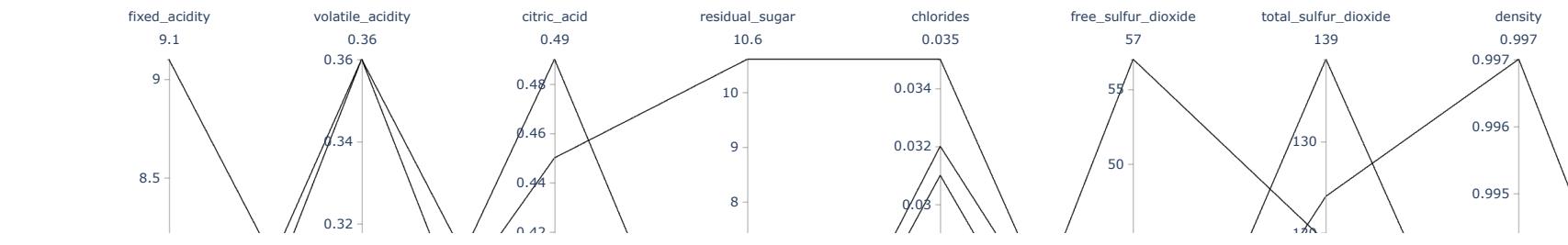
```
import plotly.express as px
color_discrete_map = ['blue','red','black','yellow','purple','orange','pink']
fig = px.parallel_coordinates(wine_quality, color='quality', color_continuous_scale=color_discrete_map)
fig.show()
```



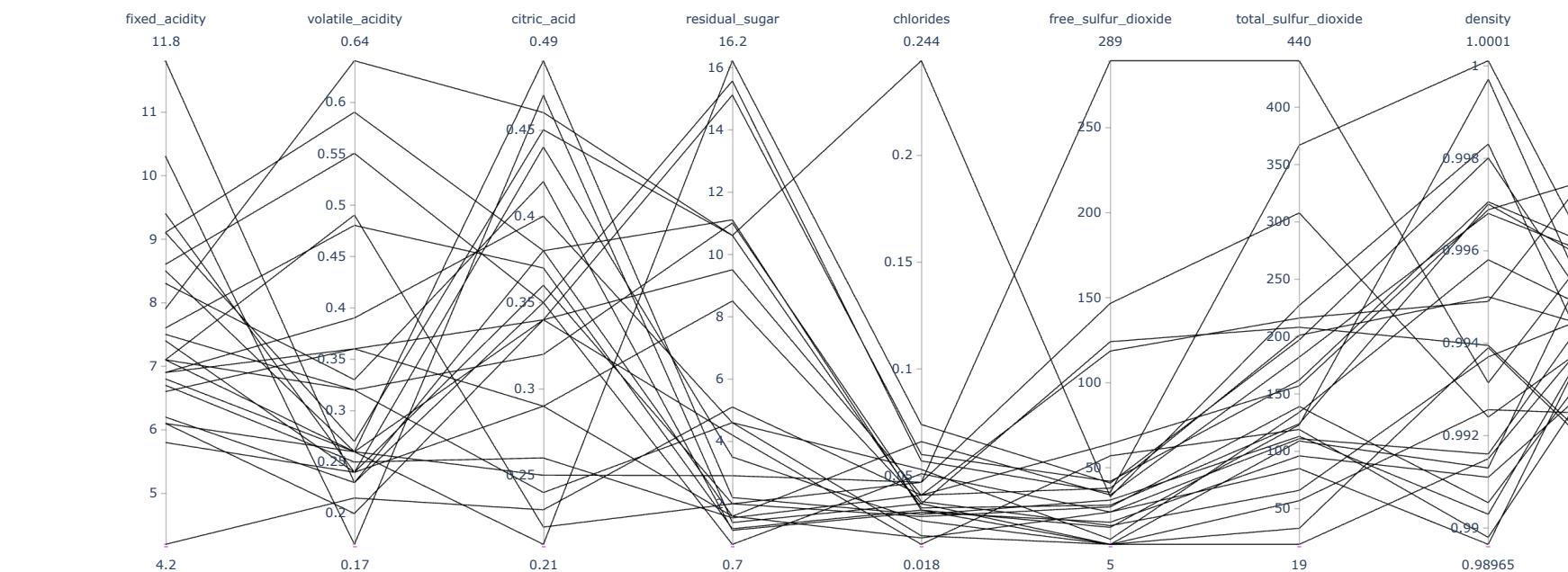
```
import plotly.express as px
fig = px.parallel_coordinates(three, color='quality',color_continuous_scale=color_discrete_map)
fig.show()
```



```
import plotly.express as px
fig = px.parallel_coordinates(nine, color='quality',color_continuous_scale=color_discrete_map)
fig.show()
```



```
import plotly.express as px
fig = px.parallel_coordinates(both, color='quality',color_continuous_scale=color_discrete_map)
fig.show()
```



both.shape

(25, 12)

wine_quality.shape

(4898, 12)

both

Lab 6. Parallel Coordinates.ipynb - Colaboratory

| | fixed_acidity | volatile_acidity | citric_acid | residual_sugar | chlorides | free_sulfur_dioxide | total_sulfur_dioxide | density | pH | sulphates | alcohol | q |
|------|---------------|------------------|-------------|----------------|-----------|---------------------|----------------------|---------|------|-----------|---------|---|
| 251 | 8.5 | 0.260 | 0.21 | 16.20 | 0.074 | 41.0 | 197.0 | 0.99800 | 3.02 | 0.50 | 9.8 | |
| 253 | 5.8 | 0.240 | 0.44 | 3.50 | 0.029 | 5.0 | 109.0 | 0.99130 | 3.53 | 0.43 | 11.7 | |
| 294 | 9.1 | 0.590 | 0.38 | 1.60 | 0.066 | 34.0 | 182.0 | 0.99680 | 3.23 | 0.38 | 8.5 | |
| 445 | 7.1 | 0.320 | 0.32 | 11.00 | 0.038 | 16.0 | 66.0 | 0.99370 | 3.24 | 0.40 | 11.5 | |
| 740 | 6.9 | 0.390 | 0.40 | 4.60 | 0.022 | 5.0 | 19.0 | 0.99150 | 3.31 | 0.37 | 12.6 | |
| 774 | 9.1 | 0.270 | 0.45 | 10.60 | 0.035 | 28.0 | 124.0 | 0.99700 | 3.20 | 0.46 | 10.4 | |
| 820 | 6.6 | 0.360 | 0.29 | 1.60 | 0.021 | 24.0 | 85.0 | 0.98965 | 3.41 | 0.61 | 12.4 | |
| 827 | 7.4 | 0.240 | 0.36 | 2.00 | 0.031 | 27.0 | 139.0 | 0.99055 | 3.28 | 0.48 | 12.5 | |
| 873 | 10.3 | 0.170 | 0.47 | 1.40 | 0.037 | 5.0 | 33.0 | 0.99390 | 2.89 | 0.28 | 9.6 | |
| 876 | 6.9 | 0.360 | 0.34 | 4.20 | 0.018 | 57.0 | 119.0 | 0.98980 | 3.28 | 0.36 | 12.7 | |
| 1034 | 7.9 | 0.640 | 0.46 | 10.60 | 0.244 | 33.0 | 227.0 | 0.99830 | 2.87 | 0.74 | 9.1 | |
| 1229 | 8.3 | 0.330 | 0.42 | 1.15 | 0.033 | 18.0 | 96.0 | 0.99110 | 3.20 | 0.32 | 12.4 | |
| 1417 | 8.6 | 0.550 | 0.35 | 15.55 | 0.057 | 35.5 | 366.5 | 1.00010 | 3.04 | 0.63 | 11.0 | |
| 1484 | 7.5 | 0.320 | 0.24 | 4.60 | 0.053 | 8.0 | 134.0 | 0.99580 | 3.14 | 0.50 | 9.1 | |
| 1605 | 7.1 | 0.260 | 0.49 | 2.20 | 0.032 | 31.0 | 113.0 | 0.99030 | 3.37 | 0.42 | 12.9 | |
| 1688 | 6.7 | 0.250 | 0.26 | 1.55 | 0.041 | 118.5 | 216.0 | 0.99490 | 3.55 | 0.63 | 9.4 | |
| 1931 | 7.1 | 0.490 | 0.22 | 2.00 | 0.047 | 146.5 | 307.5 | 0.99240 | 3.24 | 0.37 | 11.0 | |
| 2050 | 11.8 | 0.230 | 0.38 | 11.10 | 0.034 | 15.0 | 123.0 | 0.99970 | 2.93 | 0.55 | 9.7 | |
| 2373 | 7.6 | 0.480 | 0.37 | 1.20 | 0.034 | 5.0 | 57.0 | 0.99256 | 3.05 | 0.54 | 10.4 | |
| 3087 | 6.1 | 0.200 | 0.34 | 9.50 | 0.041 | 38.0 | 201.0 | 0.99500 | 3.14 | 0.44 | 10.1 | |
| 3265 | 4.2 | 0.215 | 0.23 | 5.10 | 0.041 | 64.0 | 157.0 | 0.99688 | 3.42 | 0.44 | 8.0 | |
| 3307 | 9.4 | 0.240 | 0.29 | 8.50 | 0.037 | 124.0 | 208.0 | 0.99395 | 2.90 | 0.38 | 11.0 | |
| 3409 | 6.2 | 0.230 | 0.35 | 0.70 | 0.051 | 24.0 | 111.0 | 0.99160 | 3.37 | 0.43 | 11.0 | |
| 3810 | 6.8 | 0.260 | 0.34 | 15.10 | 0.060 | 42.0 | 162.0 | 0.99705 | 3.24 | 0.52 | 10.5 | |
| 4745 | 6.1 | 0.260 | 0.25 | 2.90 | 0.047 | 289.0 | 440.0 | 0.99314 | 3.44 | 0.64 | 10.5 | |

