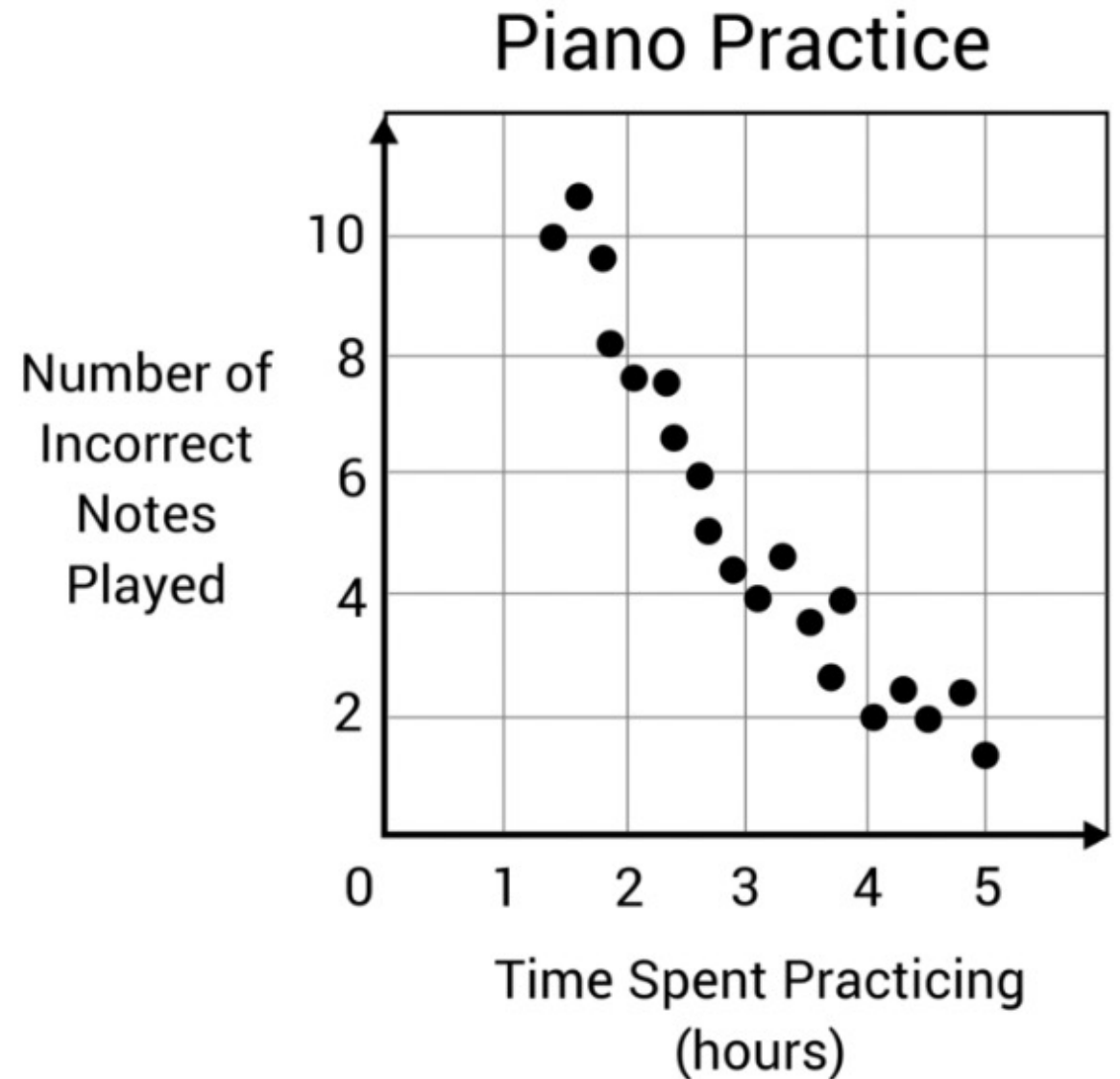


# Styling Plotly Charts

How to Add Extra Options to Customize Plotly Charts

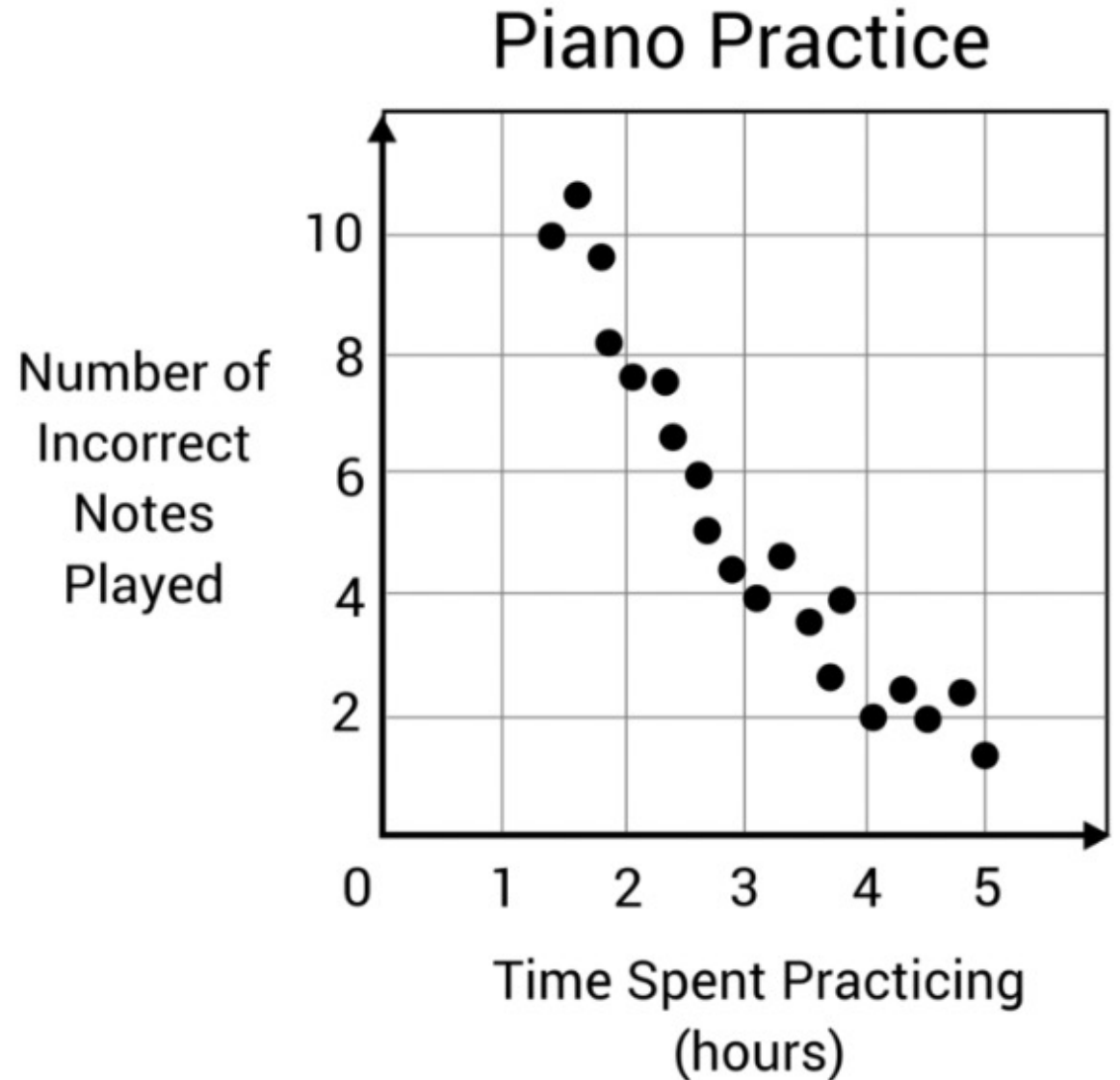
# Think Share Activity

- What are the parts of a chart?



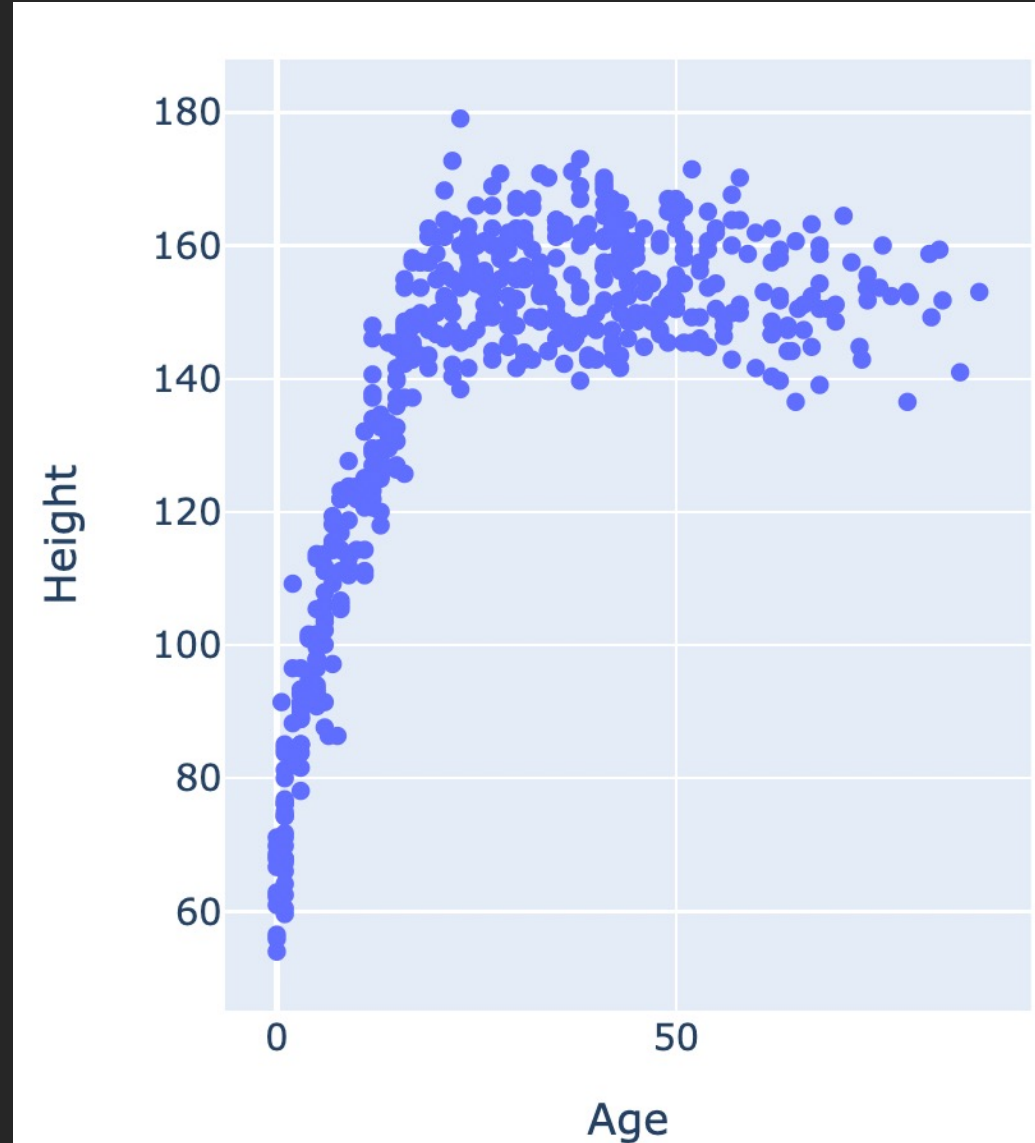
# Parts of a Chart

- Title
- Chart body
  - Axes
  - Coordinate space
  - Points, lines
- Axis labels
- Color legend



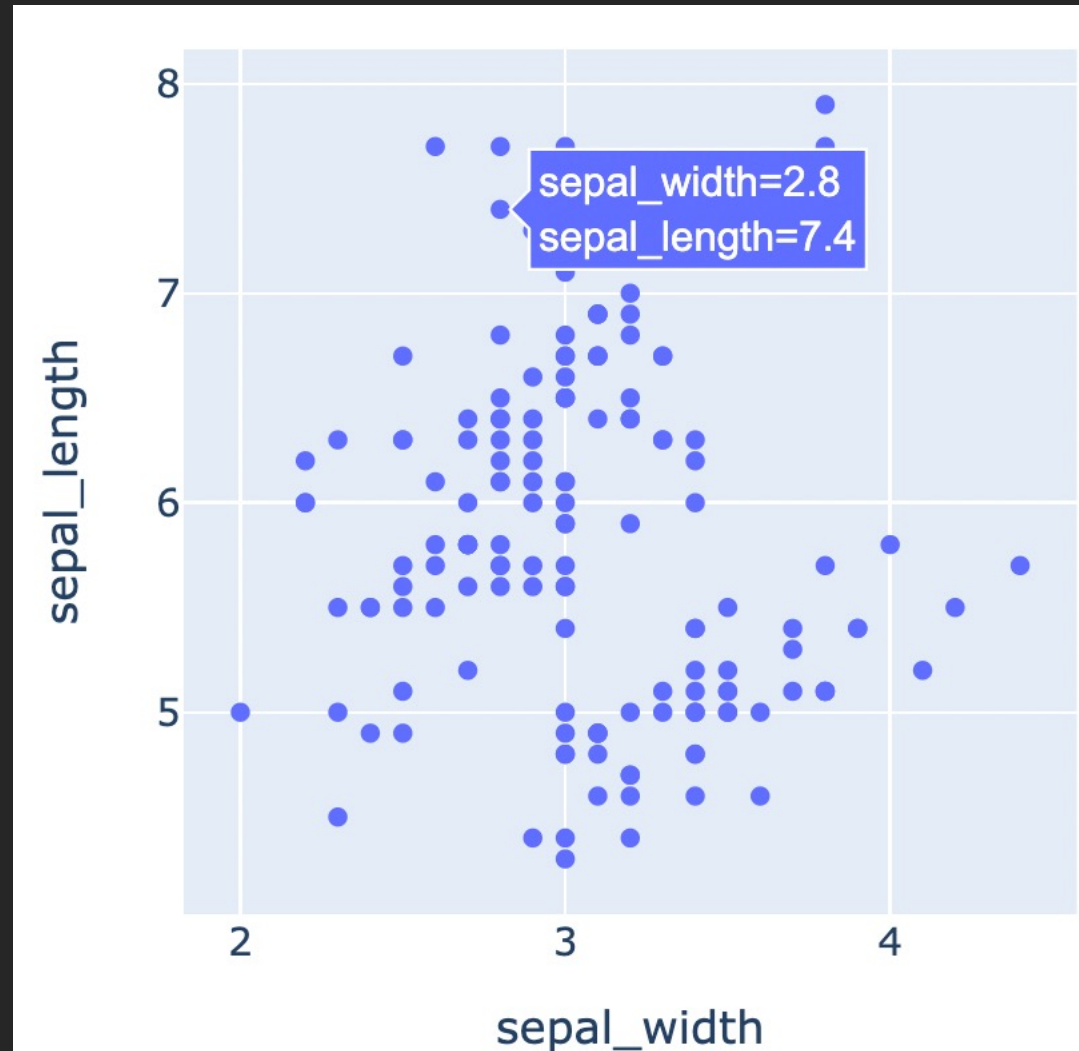
# Default Plotly Chart Styling

- For this dataset column names were:
  - Age
  - Height
  - Gender
- Axis labels depend on column names
- Looks pretty good, except no title

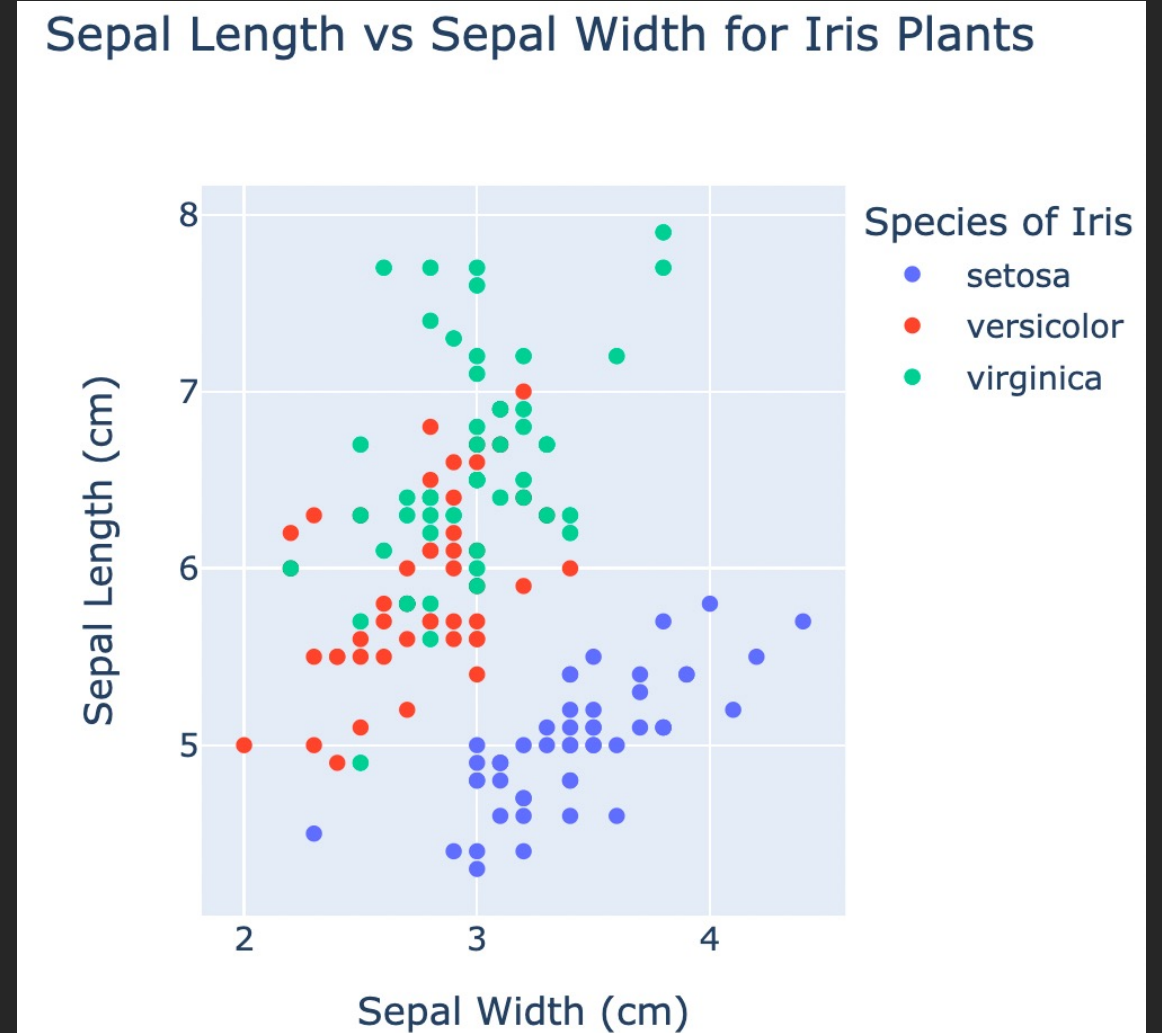
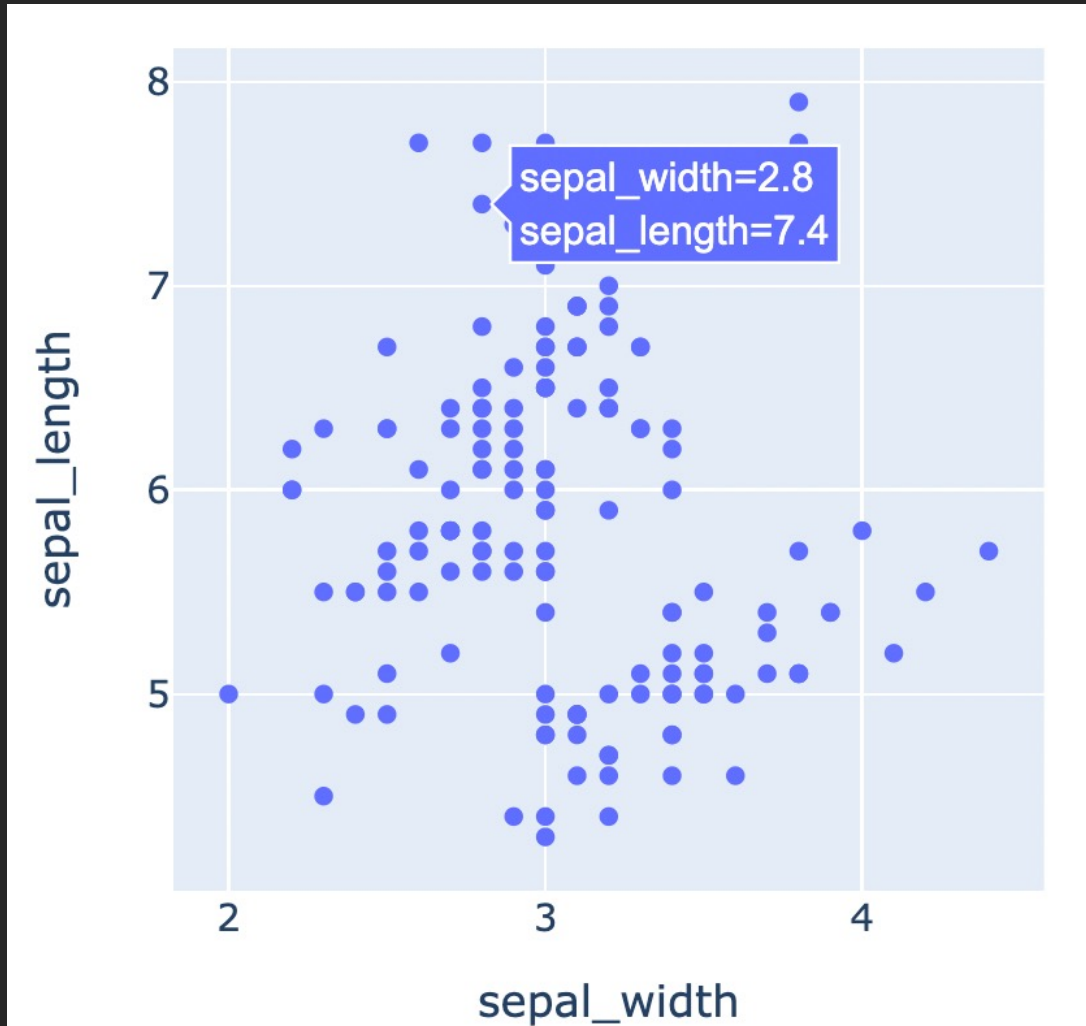


# Default Plotly Chart Styling

- For this dataset column names were:
  - sepal\_length
  - sepal\_width
- Doesn't look so nice...
- But we can customize!



# Plotly Chart Options: Before & After



# Plotly Chart Options

- Many options to change!
- Set title
- Set color of each point based on an additional variable
- Change chart labels

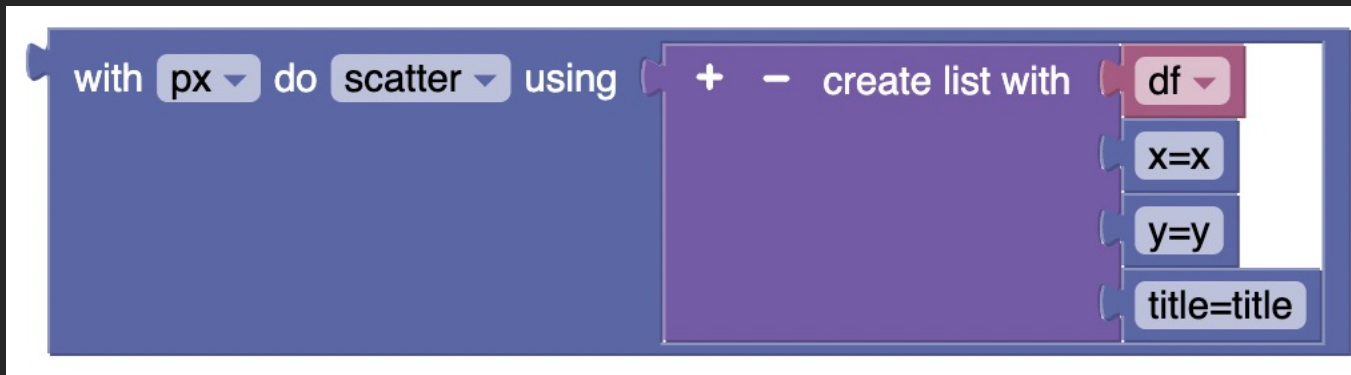
# How-to: Adding Chart Title

- Add an extra option to px.scatter

```
title = 'Sepal Length vs Sepal Width for Iris Plants'
```

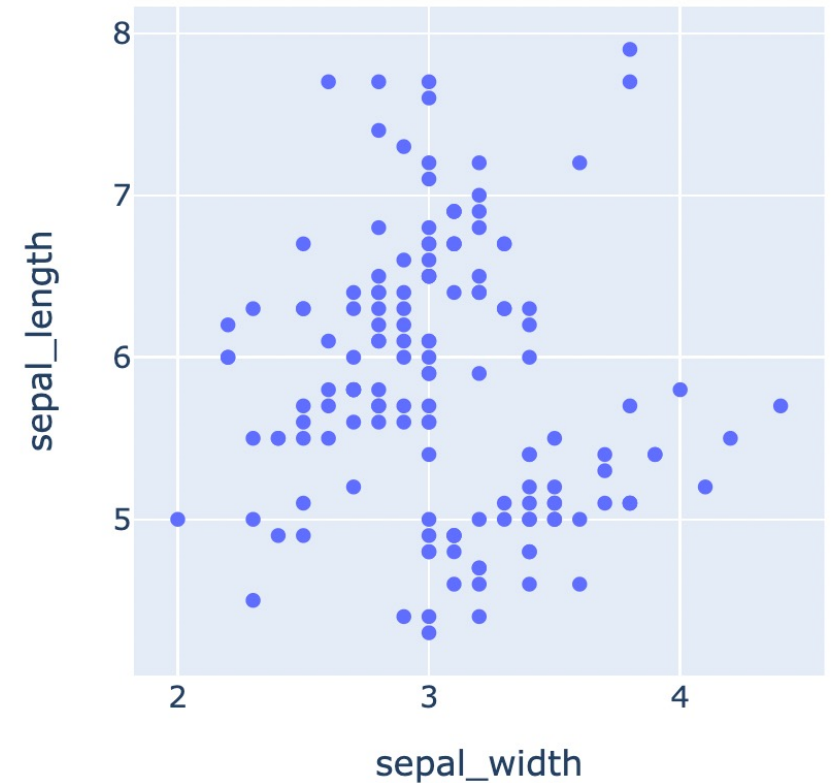
```
set title to "Sepal Length vs Sepal Width for Iris Plants"
```

```
px.scatter(df, x=x, y=y, title=title)
```



- This is equivalent to doing:

```
px.scatter(df, x=x, y=y, title="Sepal Length vs Sepal Width for Iris Plants")
```





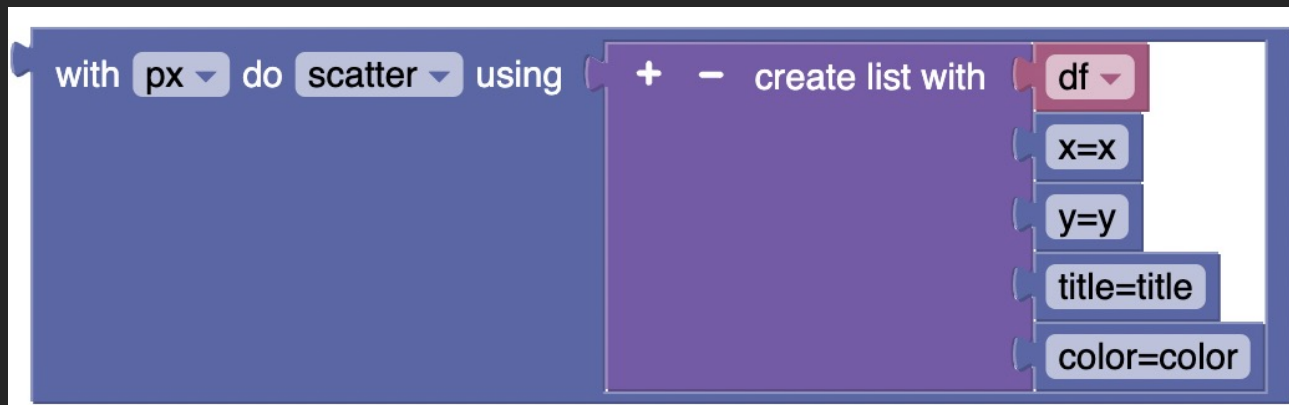
# How-to: Set Color of Points w/ Variable

- Add an extra option to px.scatter

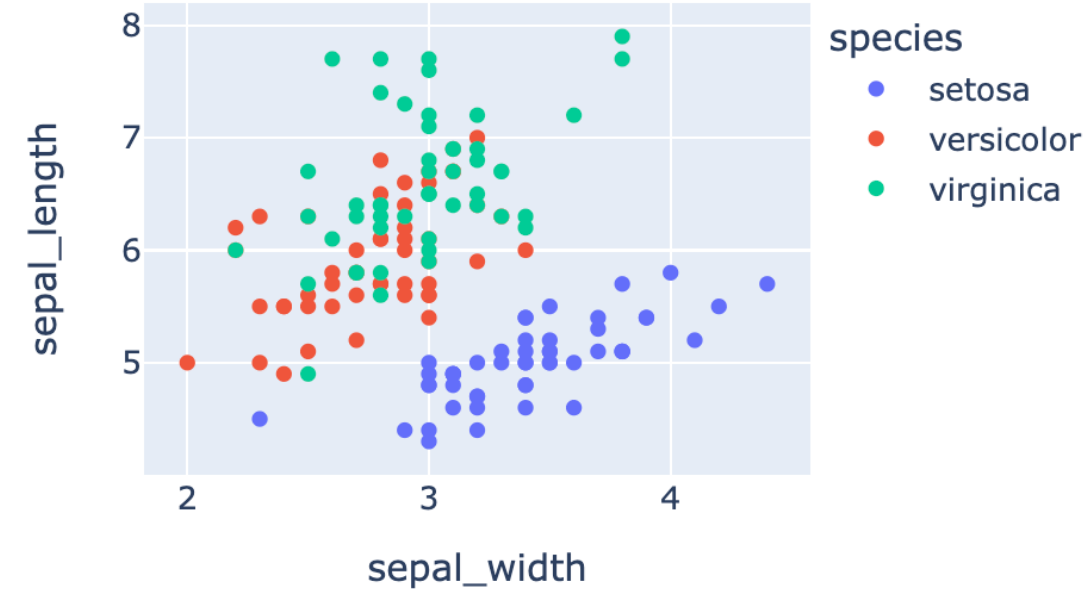
```
color = "species"
```

```
set color to "species"
```

```
px.scatter(df, x=x, y=y, title=title, color=color)
```



Sepal Length vs Sepal Width for Iris Plants



# How-to: Change Label Text

## Dictionaries in Blockly

- This is a **dictionary**, a kind of key-value storage.

```
labels = {  
    "sepal_length": "Sepal Length (cm)",  
    "sepal_width": "Sepal Width (cm)",  
    "species": "Species of Iris"  
}
```



- Blockly doesn't always generate code that is easy to read.

```
labels = dict([('sepal_length', 'Sepal Length (cm)'), ('sepal_width', 'Sepal Width (cm)'), ('species', 'Species of Iris')])
```

# How-to: Change Label Text

- Add an extra option to px.scatter

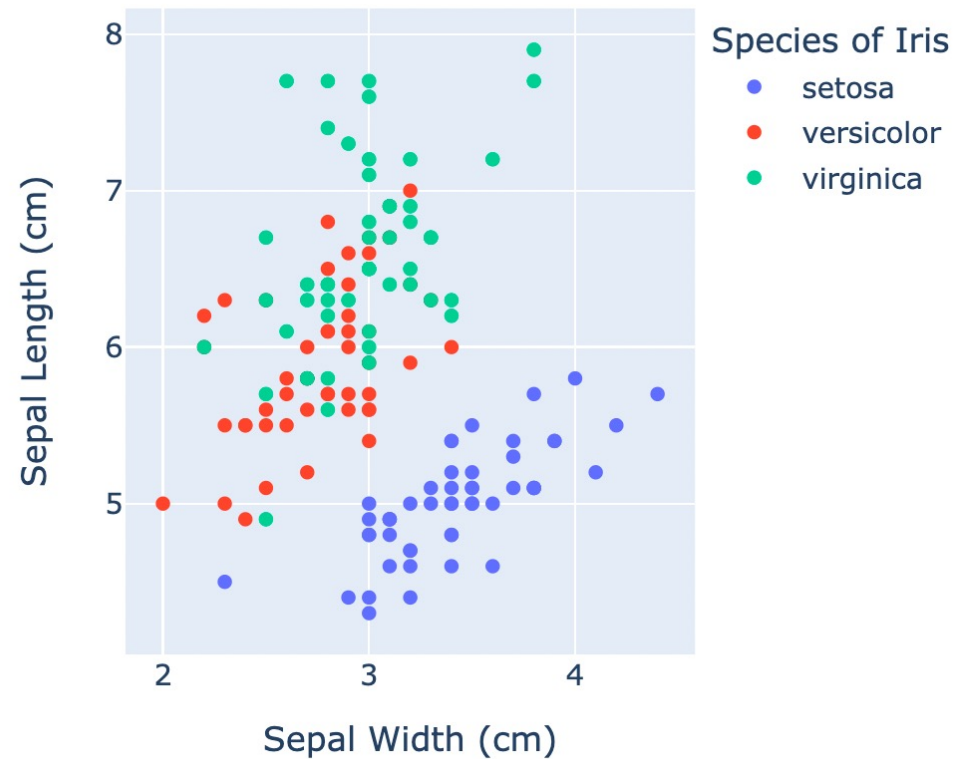
```
px.scatter(df, x=x, y=y, title=title, color=color, labels=labels)
```

with `px` do `scatter` using

+ - create list with

- `df`
- `x=x`
- `y=y`
- `title=title`
- `color=color`
- `labels=labels`

Sepal Length vs Sepal Width for Iris Plants



# Summary

- Parts of a chart
- Some ways to customize Plotly charts
- Plotly chart options with Blockly