



# Continuous X and Y data

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## `geom_point()`, `geom_line()`, `geom_qq_line()`

- `geom_point()`
  - `geom_point()` makes scatter plots
- `geom_line()`
  - `geom_line()` makes line plots
- `geom_qq_line()`
  - `geom_qq_line()` makes quantile-quantile plots
  - This helps you compare multiple probability distributions

# Links between 3 geoms

- Code for these 3 geoms must start with `ggplot()` in order for them to work
- All need numeric data on x and y axis (no character or logic)

# geom\_point() code and graph

This graph represents the points  
of 3 different species of irises and  
Their sepal width and lengths.

```
``{r}  
data("iris")  
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, col=Species)) +  
  geom_point(pch=0, size=2) +  
  xlab("Sepal Length") + ylab("Sepal Width")  
``
```



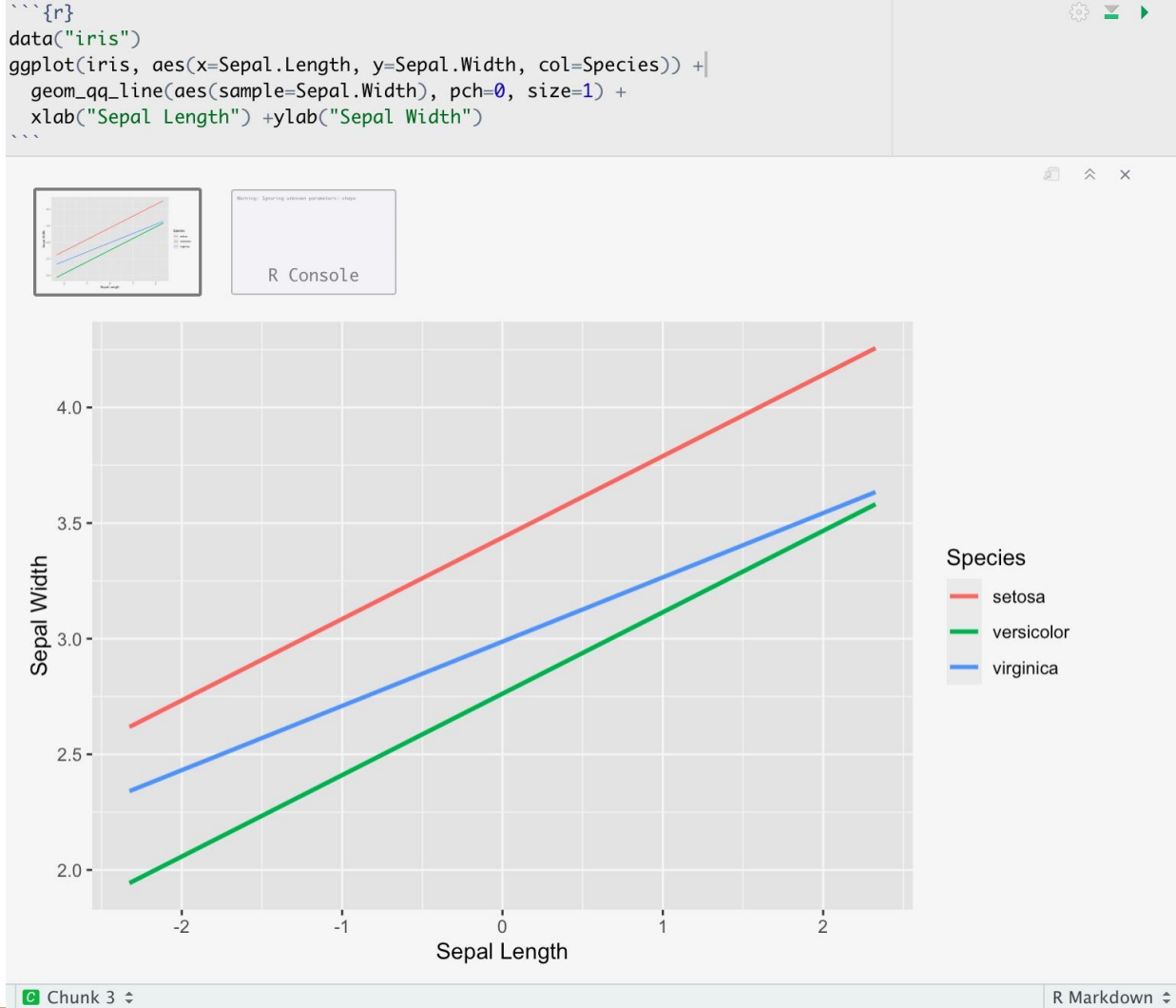
# geom\_line() code and graph

This graph represents the 3 species of irises sepal widths and lengths in a line graph.

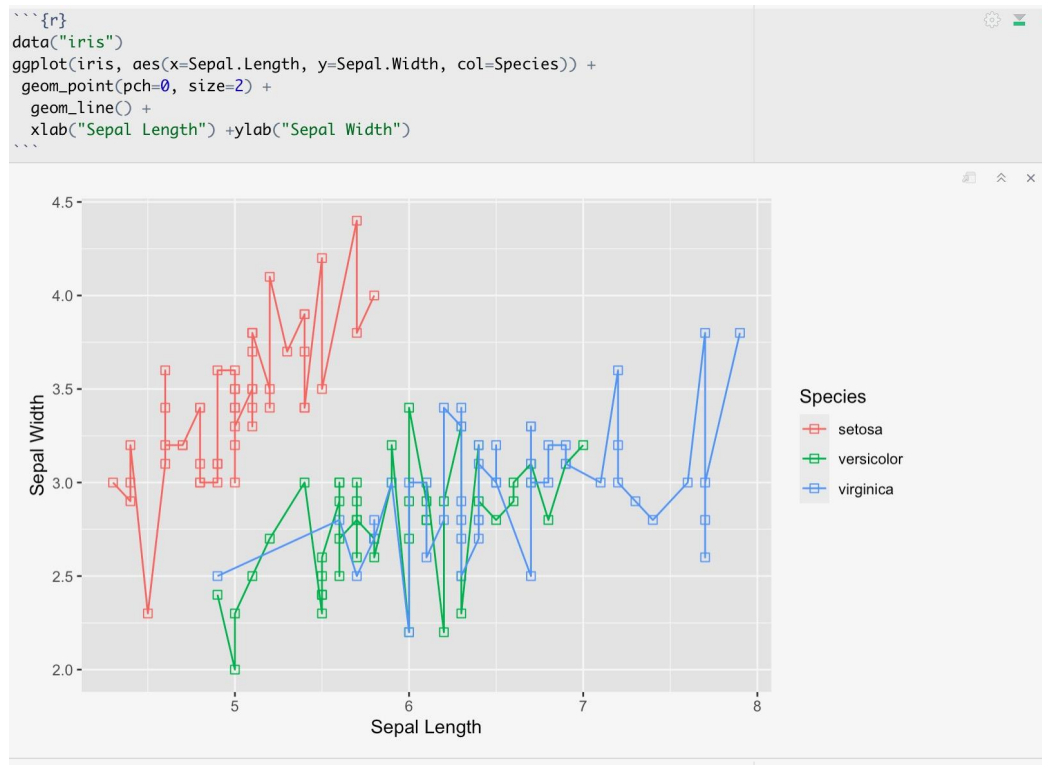


# geom\_qq\_line() code and graph

This represents 3 species of irises and their sepal widths and lengths in a quantile-quantile way which allows us to compare multiple probability distributions.



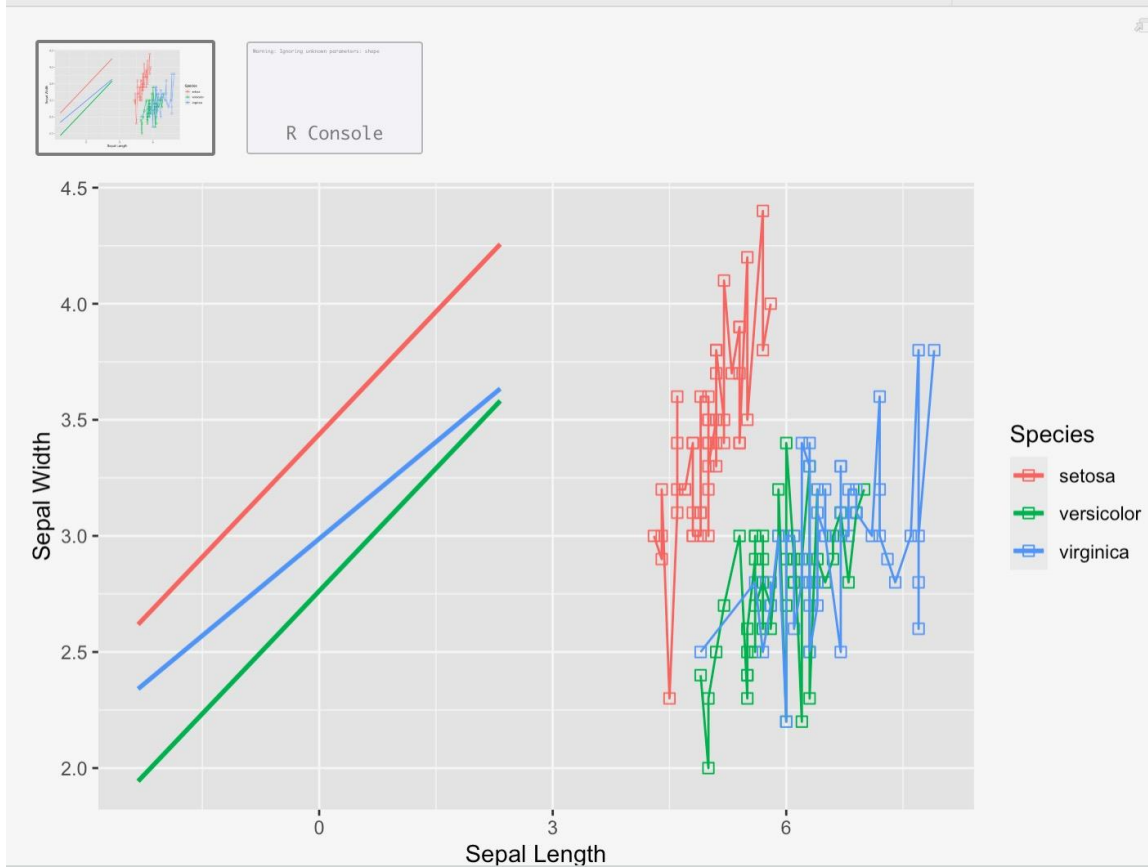
# Different options to code geom\_line()



pch and size in geom\_line() vs geom\_point() creates slightly different graphs.

geom\_point(),  
geom\_line(),  
geom\_qq\_line()

```
data("iris")
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, col=Species)) +
  geom_point(pch=0, size=2) +
  geom_line() +
  geom_qq_line(aes(sample=Sepal.Width), pch=0, size=1) +
  xlab("Sepal Length") + ylab("Sepal Width")
``
```





# Helpful Websites

[https://ggplot2.tidyverse.org/reference/geom\\_point.html](https://ggplot2.tidyverse.org/reference/geom_point.html)

[https://rpubs.com/admiralbyng/geom\\_line\\_tutorial](https://rpubs.com/admiralbyng/geom_line_tutorial)

[https://ggplot2.tidyverse.org/reference/geom\\_qq.html](https://ggplot2.tidyverse.org/reference/geom_qq.html)