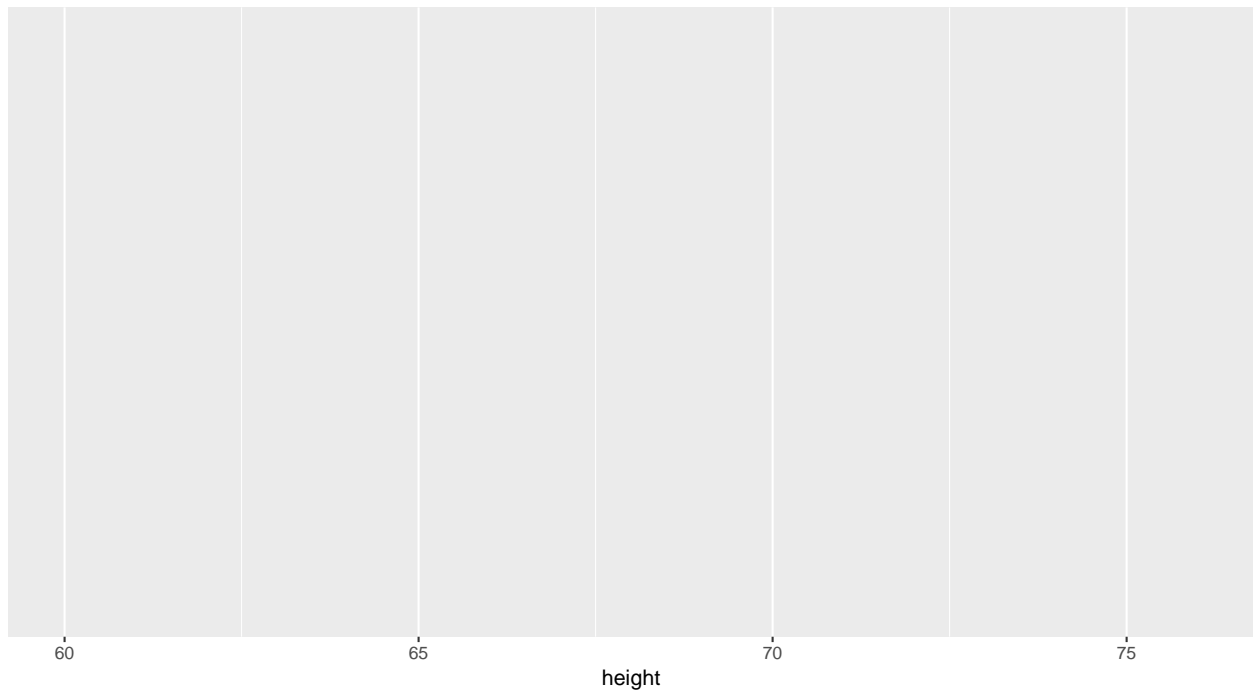# Introduction to EDA

Pramod Duvvuri

3/11/2019
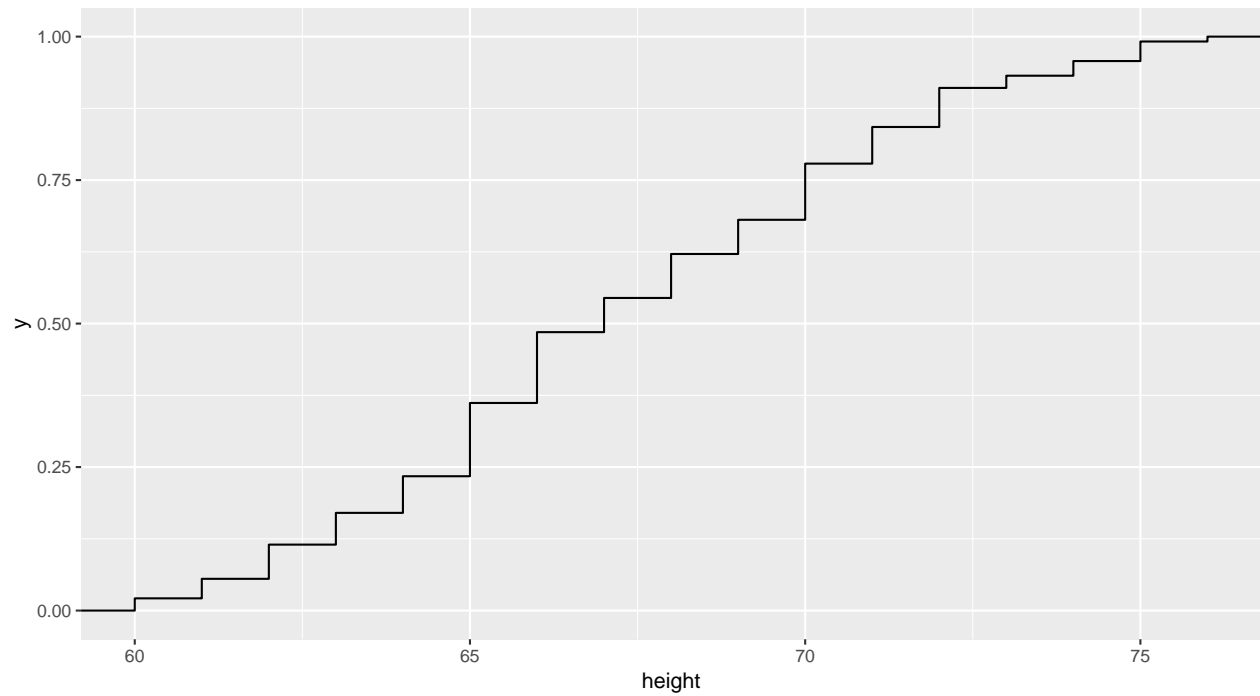
Learning ggplot2

```r
# Load installed packages
library('lattice')
library('ggplot2')
```

```r
ggplot(singer, aes(x = height))
```
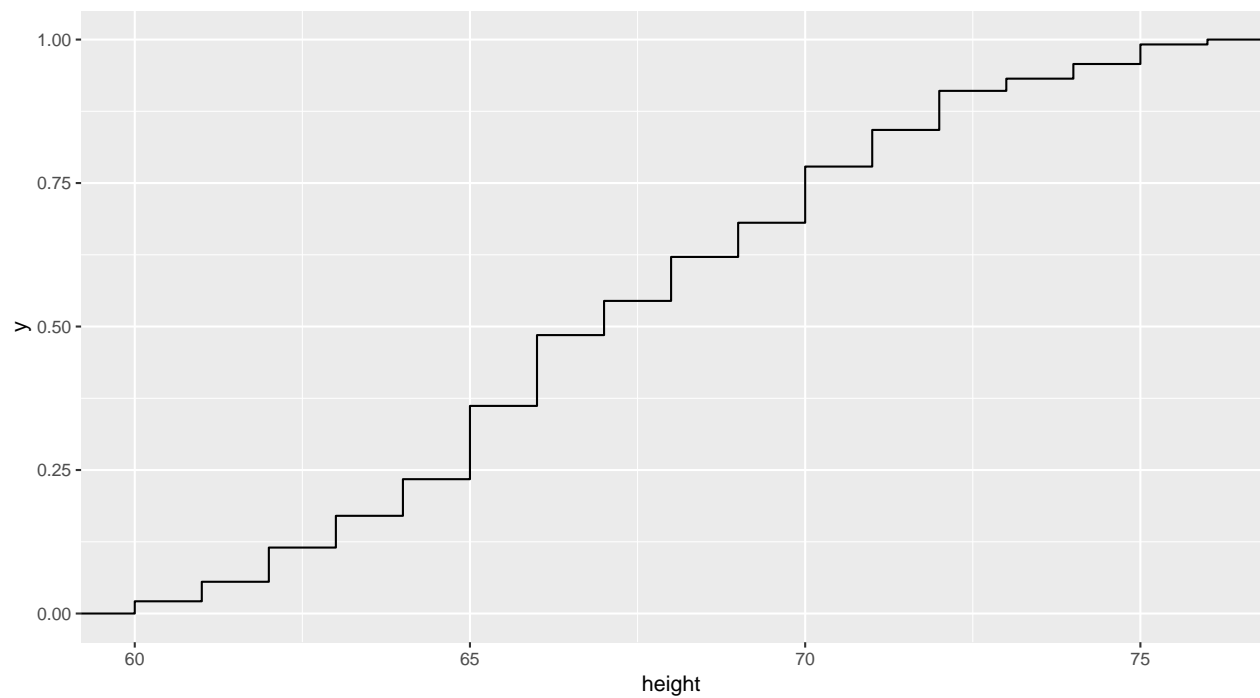
```r
# ECDF in ggplot2
ggplot(singer, aes(x = height)) + stat_ecdf()
```
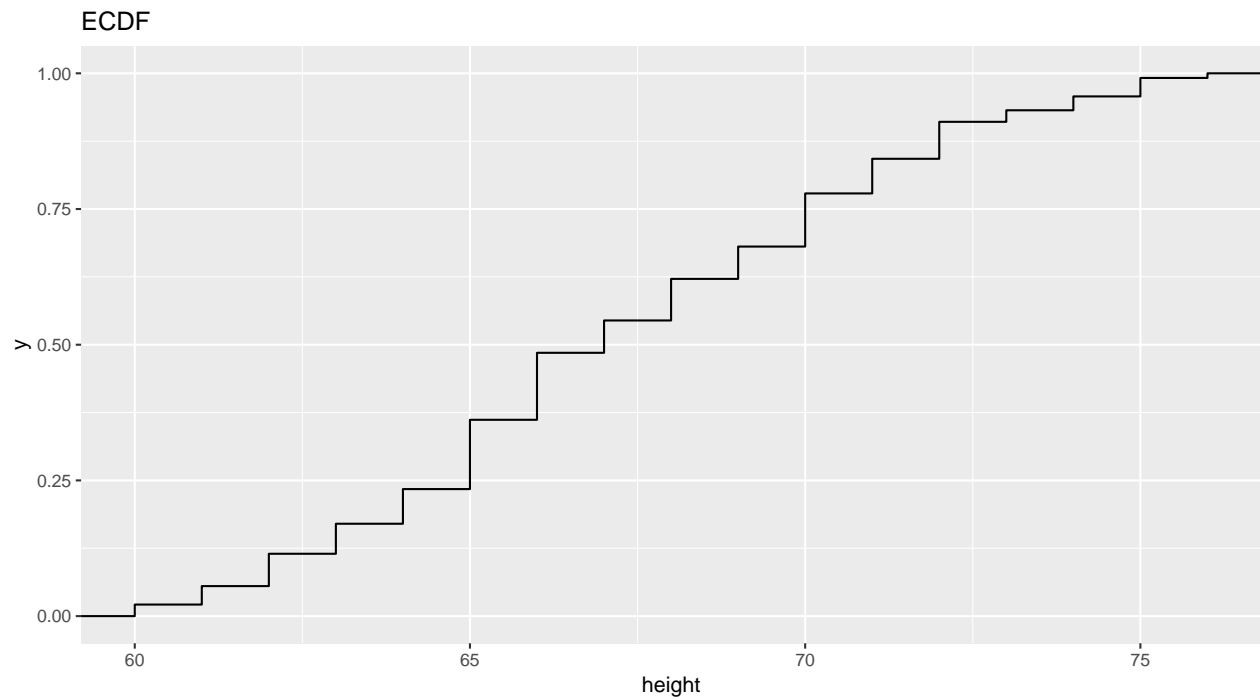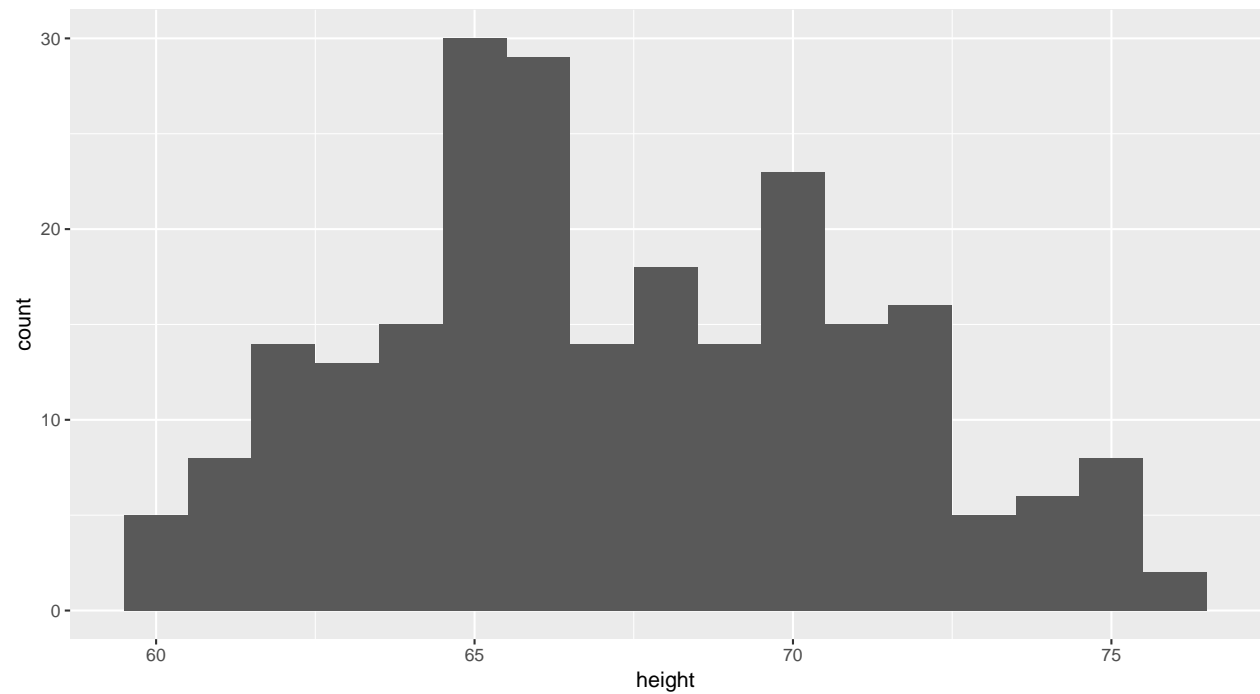
Basic Plots

```r
# Alternate way to get ECDF
singer_gg <- ggplot(singer, aes(x = height))
singer_gg + stat_ecdf()
```
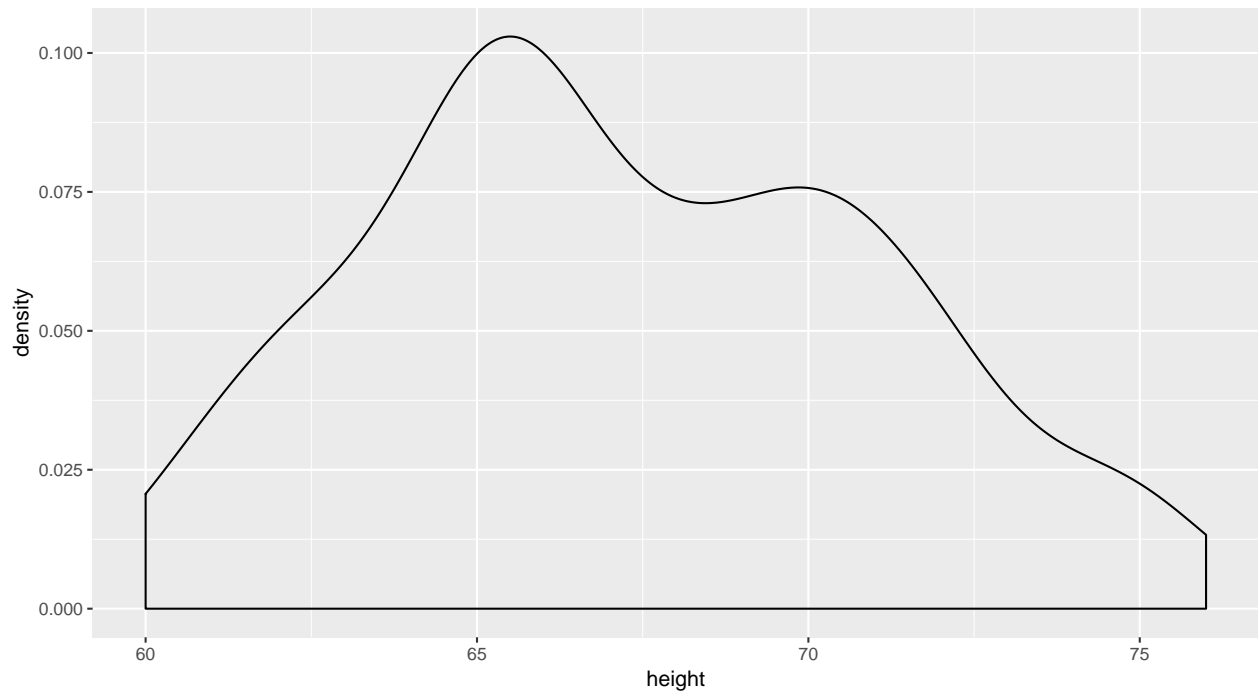


```r
# Add Labels
singer_gg + stat_ecdf() + ggtitle('ECDF')
```
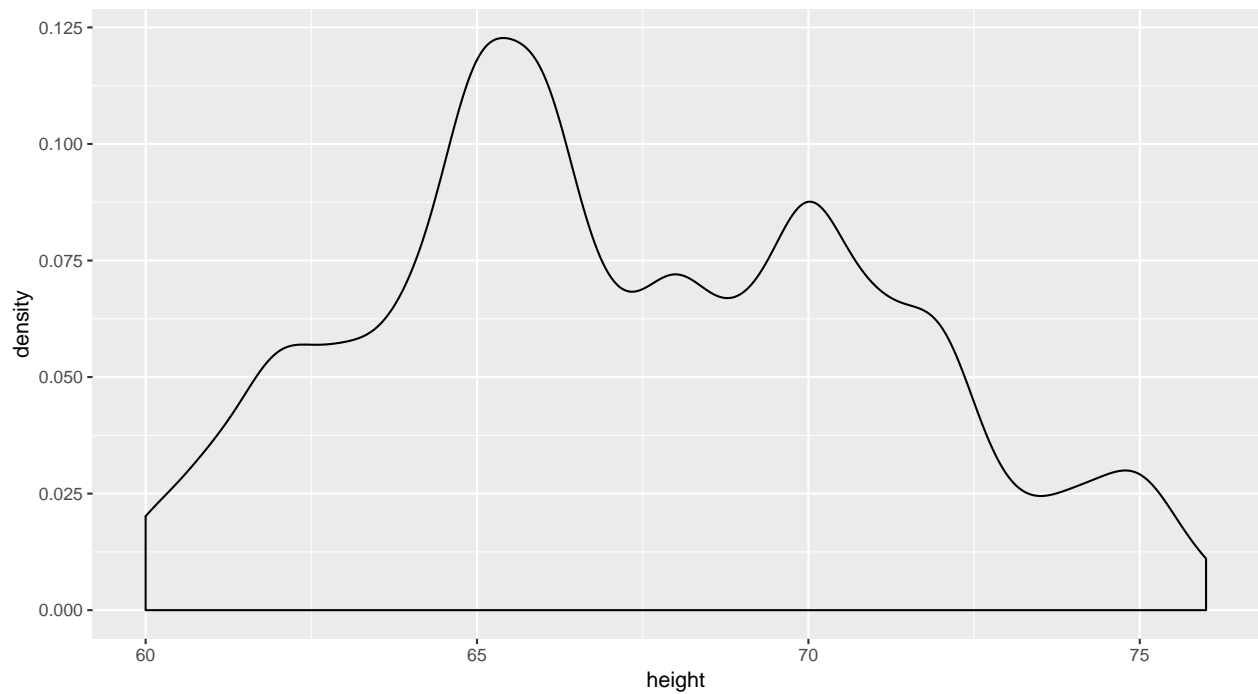
ECDF


```r
# Histogram
#ggplot(singer, aes(x= height)) + geom_histogram()
ggplot(singer, aes(x= height)) + geom_histogram(binwidth = 1)
```
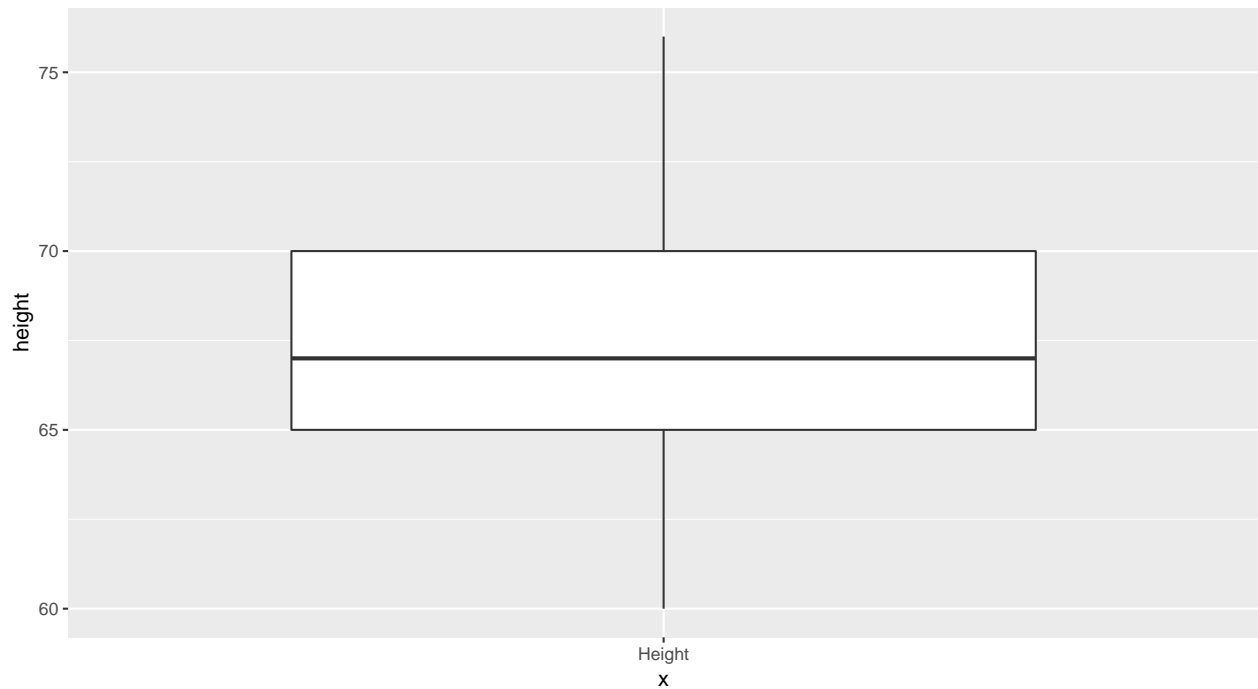


```r
# Density Plot
ggplot(singer, aes(x= height)) + geom_density()
```
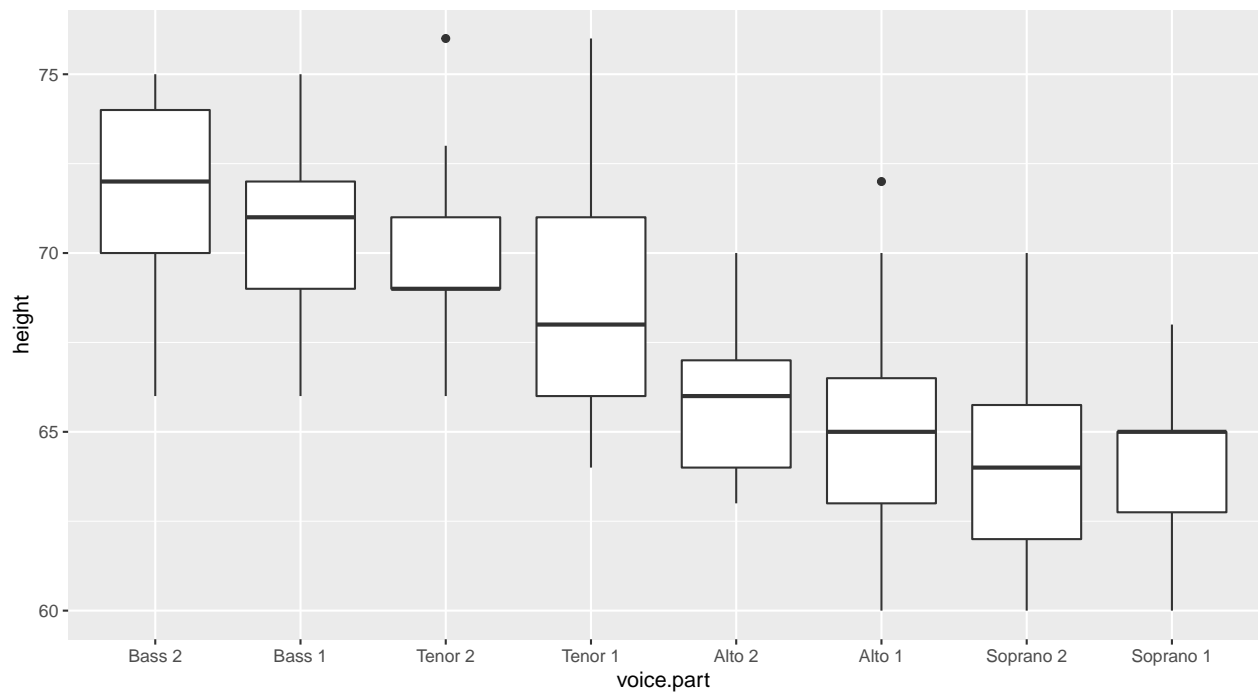
```
ggplot(singer, aes(x= height)) + geom_density(adjust = 0.5)
```
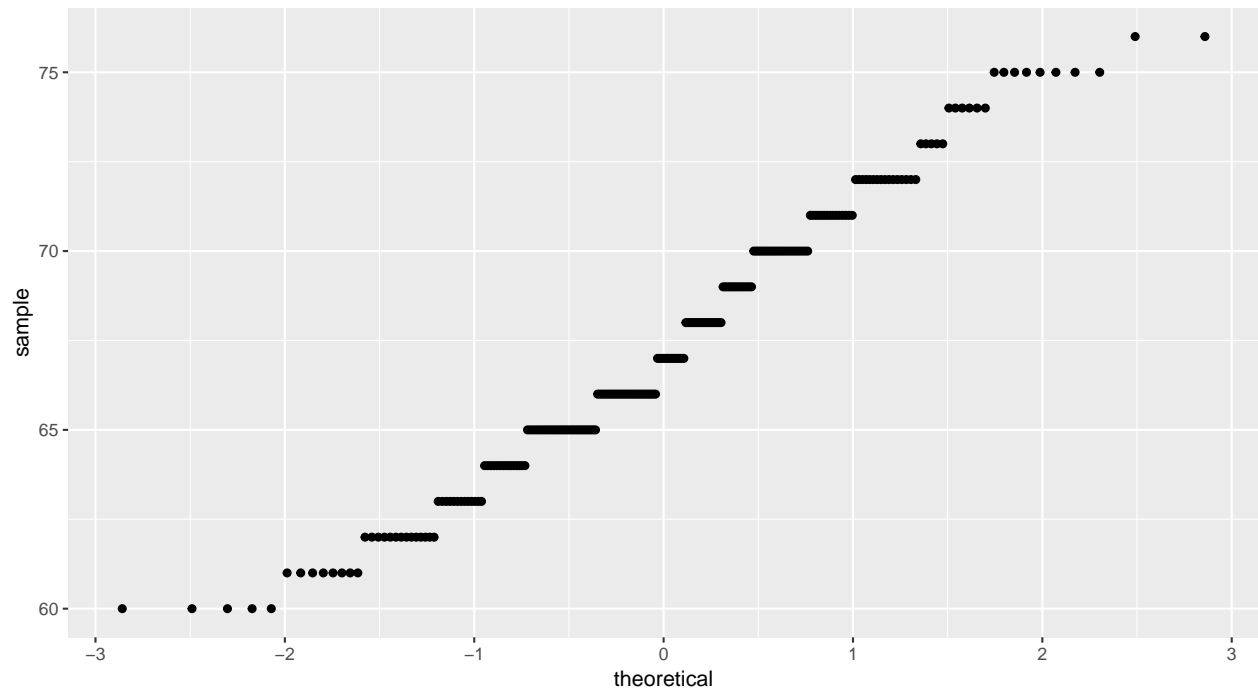


```
# Boxplot
ggplot(singer, aes(x= "Height", y = height)) + geom_boxplot()
```
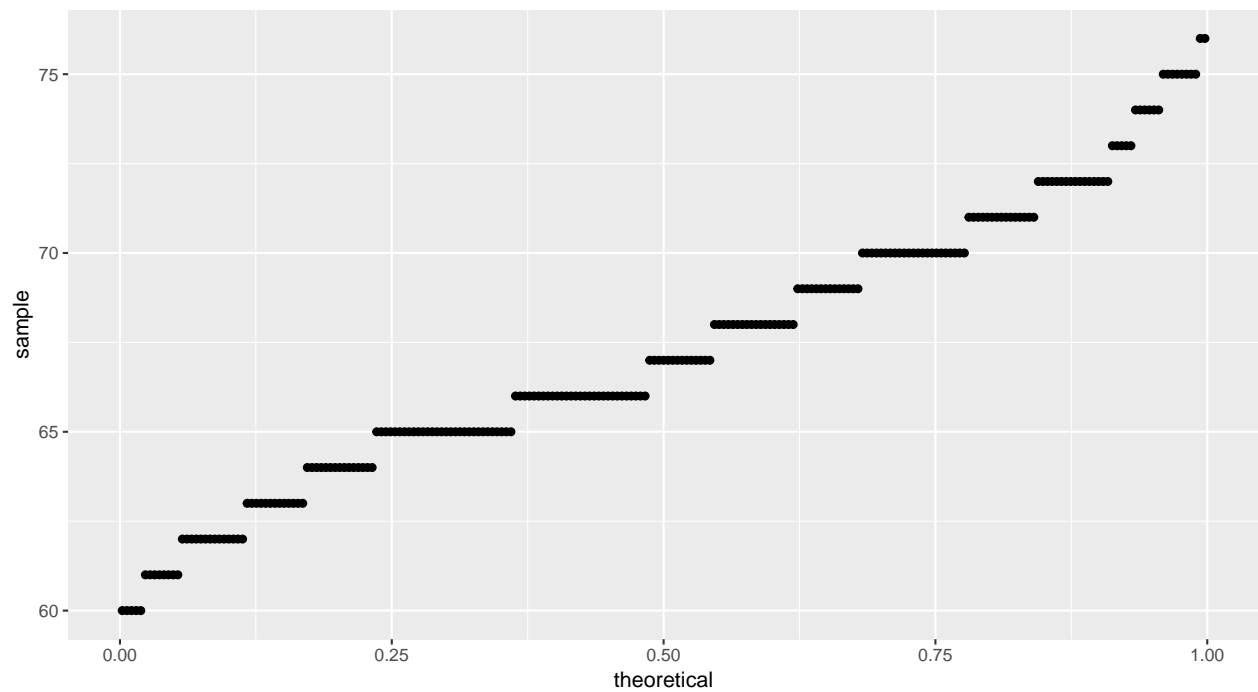
```
# Multiple Boxplots
ggplot(singer, aes(x = voice.part, y = height)) + geom_boxplot()
```
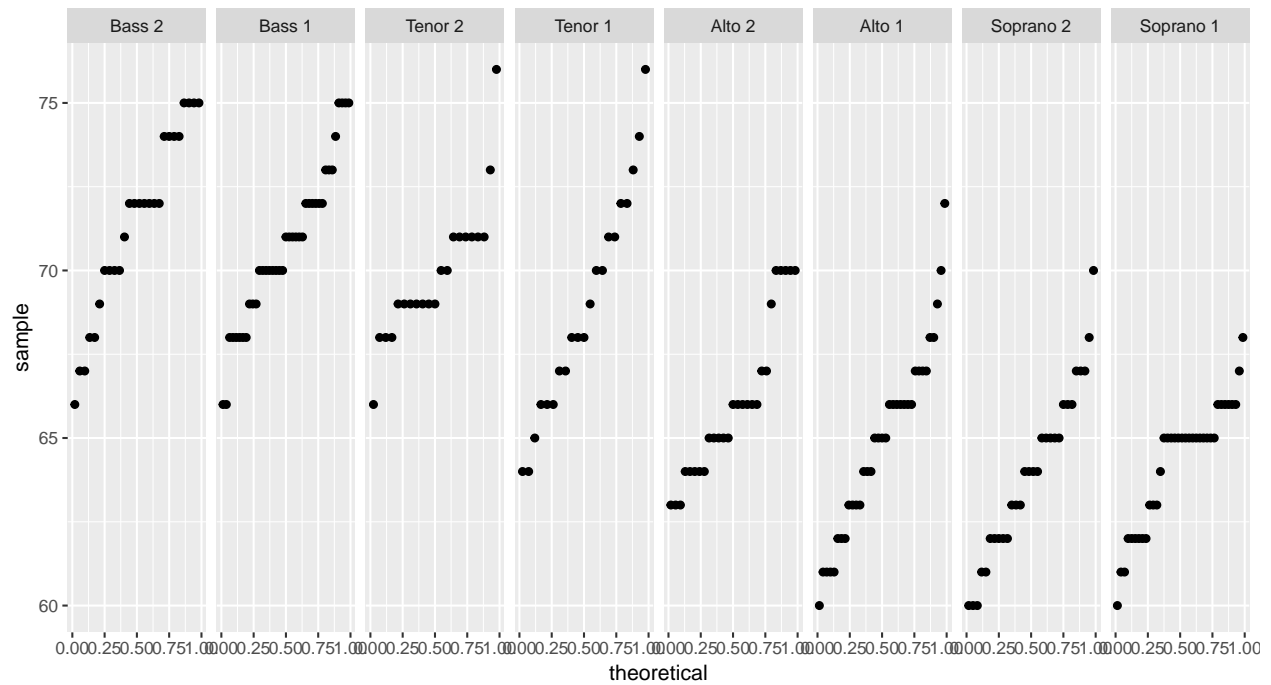


```
# QQ-Plot using a Normal Distribution
ggplot(singer, aes(sample = height)) + stat_qq()
```

```
# QQ-Plot using a Uniform Distribution
ggplot(singer, aes(sample = height)) + stat_qq(distribution = qunif)
```



```
# Faceting
ggplot(singer,aes(sample = height)) + stat_qq(distribution = qunif) + facet_grid(~voice.part)
```

```
ggplot(singer, aes(sample = height)) + stat_qq(distribution = qunif) + facet_wrap(~voice.part, ncol = 2)
```