**Draft**

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| --- | --- | --- | --- | --- |
| **Variable/Combo** | **Stats** | **Graph Options** | **Value/Purpose** | **ggplot geom** |
| **Univariate** | | | | |
| Continuous | Mean/median, sd, quartiles, range | Histogram  Density plot | Visualize distribution | geom\_histogram()  geom\_density() |
| Categorical | Frequency and/or proportion | Bar graph | Visualize freq/prop | geom\_bar() |
| **Bivariate** | | | | |
| Continuous & continuous | Correlation coefficient  Regression equation | Scatter Plot; fitted line  2D Plot (large N) | Visualize association/co-variation | geom\_point()  geom\_smooth(“lm”)  geom\_hex()  stat\_density\_2d() |
| Continuous & categorical | Comparison of Means  t-test  One-way ANOVA | Box Plot  Violin Plot  Jitter Plot | Compare distributions  Association b/w | geom\_boxplot()  geom\_violin()  geom\_jitter()  geom\_density() |
| Categorical & categorical | Chi-squared test of independence | Mosaic Plot  Treemap  Stacked/grouped bar chart | Compare frequencies or proportions  Association b/w | library(treemapify)  geom\_treemap()  geom\_bar(position = “dodge”)  geom\_bar(position = “stack”) |
| Continuous & time |  | Line Plot (if multiple)  Area Plot (if single) | Variation over time | geom\_line()  geom\_area() |
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