Math notation

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Important stuff:

1. To write math, it needs to be within dollar signs.

- One dollar sign is the same line, two dollar signs is a new line and indented. For example, compare X versus

$$X$$

2. Subscripts and superscripts.

- You write subscripts with an underscore _, and superscripts with a ˆ. So for example, X_i and Y^2.
- If you want more than one thing in the sub or super script, you need to use curly brackets. For example, X_{i1}

3. Greek symbols

- To write greek symbols, you just type the word after a slash. So for example,

$$Y_i = \beta_0 + \beta_1 X_{i1}$$

You can also do σ^2 e.g. for variance.

4. Bars and hats

- to do a bar over something (e.g. X bar to be the mean of X), you type $\bar{X}$.
- in the same way, you can do hats e.g. for regression coefficient estimates $\hat{\beta}_1$

5. If you want to refer to an equation by number, instead of using the double dollar signs, you can use

$$Y = \beta_0 + \beta_1 X \tag{1}$$

I am talking about my equation 1 in the text.