

Video: “Bar chart basics in MATLAB” (03:41)

Video (00:00)

We’ll begin by creating a bar chart for the monthly totals of measles. We already created a folder for lesson 4 and a script and downloaded the data. I’ll create a variable called `measlesByMonth` which is the column sum of measles, that is `sum(measles, 1);`. Now I’m going to display `measlesByMonth` using a bar chart. I create a new figure, and I use the `bar` command. Just like I used `plot` before with line graphs, now I’m using `bar`.

(00:32)

When I execute the cell, I get a bar chart, but I see that there is work to be done. The axes aren’t labeled, and the y-axis isn’t scaled. I’ll scale to “cases in thousands” by dividing by a thousand, and I’ll add an x-label with the word “Month”. Y-label will be “Cases (in thousands)”. I’ll put “in thousands” in parenthesis to make the label a little more readable.

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I also need to add a title, “Measles in NYC 1931-1971”. We save the script and execute, and we see a finished bar chart.

(01:40)

Now I’d like to polish the graph a little bit by directly manipulating axis properties using `gca`. I’m going to label the x-axis with indicators of the month rather than the numbers one through twelve. Let me start by making a copy of this code so I have a before and after.

(02:00)

I’m going to use `gca` (graphics current axis) to manipulate axis properties. We’ll use the `set` command. `set` allows you to change many properties of the axis. You give the property name and the value you want to set. We’re going to set the `XTickLabel`, but first we have to set the `XTickLabelMode` to manual, telling MATLAB that we will set the ticks rather than having it do it. Now I set the `XTickLabel`. Rather than giving a long string here, I’ll define a new variable `mylabels`.

(02:37)

Now I have to define the variable `mylabels`. I can put the definition anywhere as long as it’s before I use it. I type `mylabels`, and I’m going to assign it a list of strings. I enclose those strings in curly brackets. It’ll be the first letters of each month. January-J, February-F, M for March, etc.

(03:17)

Ah, finally. I end the statement with an enclosing curly brace, save the cell and execute, and now I see my resulting graph with the labels instead of the tick numbers.