INTRODUCTION TO COMPUTER PROGRAMMING IN PYTHON

Lesson 4

Astro Scholars 2022

Review

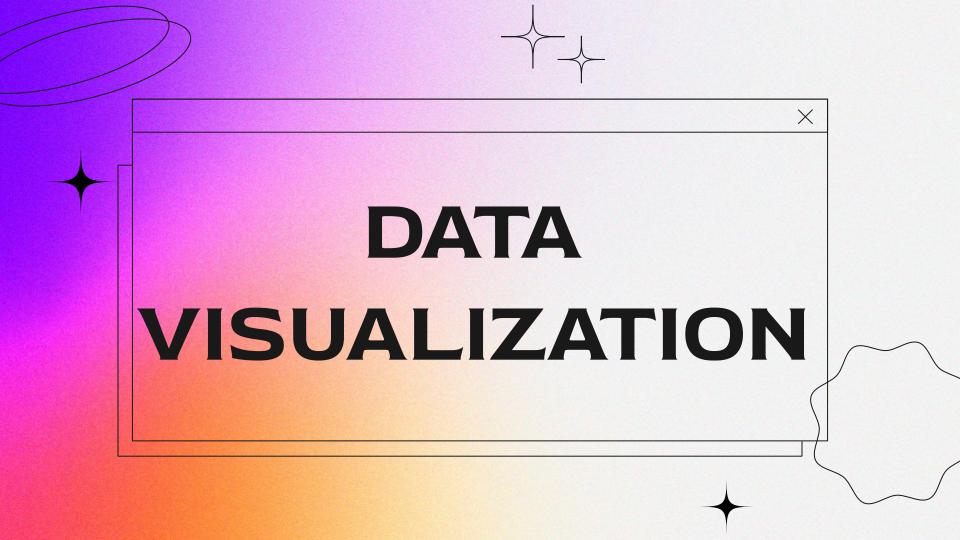
Plots

- Create a figure and axes
- Specify what you want to plot on the axes
 - o If a 2D array, image, use ax.imshow(name of image)
 - o If data, use ax.plot(xdata, ydata)
- Display your figure, plt.show()

Arrays

- Work with many data at once in a row column format
- Do mathematical operations on all values in an array at once
- Index values by row and then column, remember counting starts from 0







Customize a Plot!

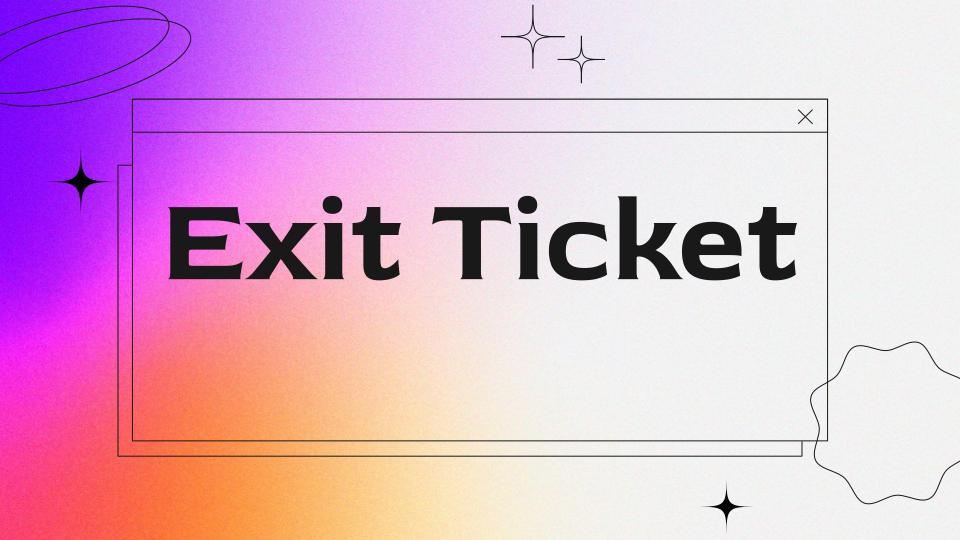
- Use different colors for different data
- Use different line styles and line widths to differentiate lines
- Use labels for data and create a legend
- Label your axes!

FUNCTIONS

Why use a Function?

- A function is a block of code which only runs when it is called
- You can pass data, known as parameters, into a function
- The function can return output after doing some operations on the input
- Functions make code repeatable without rewriting the same block of code every time you need it
- They make your code modular, so you can import functions from one Python file to another (similar to how we import Python libraries that come with their own functions)









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1. At what point(s) were you most engaged as a learner?



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2. What concept from today's lecture would you like more understanding or elaboration on?



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3. At what point(s) were you least engaged as a learner?



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