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CS 4485

Objectives

1. Install Python and Bokeh
2. Implement a Bokeh visualization
3. Optional: make slide on GSR.

Python + Bokeh

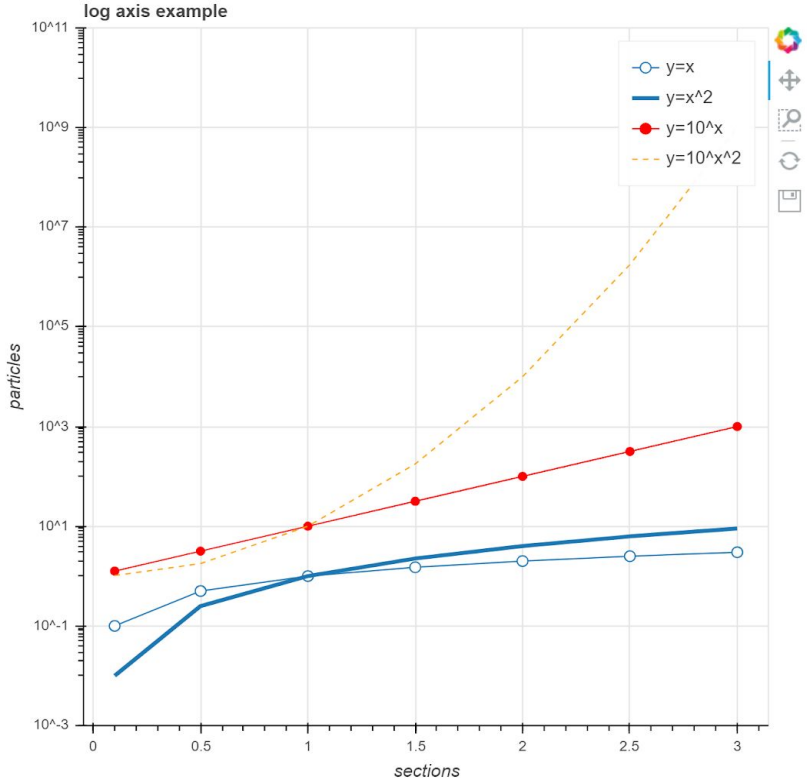
.py] - C:\Users\rohit\OneDrive\Documents\College\CS 4485\bokehVisualization.py - PyCharm

Window Help

llege 〉 CS 4485 〉 bokehVisualization.py

actionfigures.py | crocs.py | bokehVisualization.py

```python
from bokeh.plotting import figure, output_file, show

# prepare some data
x = [0.1, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0]
y0 = [i**2 for i in x]
y1 = [10**i for i in x]
y2 = [10**(i**2) for i in x]

# output to static HTML file
output_file("log_lines.html")

# create a new plot
p = figure(
   tools="pan,box_zoom,reset,save",
   y_axis_type="log", y_range=[0.001, 10**11], title="log axis example",
   x_axis_label='sections', y_axis_label='particles'
)

# add some renderers
p.line(x, x, legend_label="y=x")
p.circle(x, x, legend_label="y=x", fill_color="white", size=8)
p.line(x, y0, legend_label="y=x^2", line_width=3)
p.line(x, y1, legend_label="y=10^x", line_color="red")
p.circle(x, y1, legend_label="y=10^x", fill_color="red", line_color="red", size=6)
p.line(x, y2, legend_label="y=10^x^2", line_color="orange", line_dash="4 4")

# show the results
show(p)
```



GSR

- The galvanic skin response (GSR) refers to changes in sweat gland activity that are reflective of the intensity of our emotional state, otherwise known as emotional arousal.
- Both positive (“happy” or “joyful”) and negative (“threatening” or “saddening”) stimuli can result in an increase in arousal – and in an increase in skin conductance. The GSR signal is therefore not representative of the type of emotion, but the intensity of it.
- Skin conductance is not under conscious control. Instead, it is modulated autonomously by sympathetic activity which drives aspects of human behavior, as well as cognitive and emotional states.
- Skin conductance is captured using skin electrodes which are easy to apply. Data is acquired with sampling rates between 1 – 10 Hz and is measured in units of micro-Siemens (μS).