

# **Graphing (and what not to do)**

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What is the purpose of graphs?

# Purpose of graphs

Visually

- Expressing complex data in a simple format
- Illustrate trends/relationships in data

## What makes a good graph?

- Clean, uncluttered look
- Label titles, axes, series, and units
- Add gridlines to assist with comparison/estimation
- Emphasizes key takeaways
- Accessible to audience

## **Examples of “bad” graphs that we’ve actually seen**

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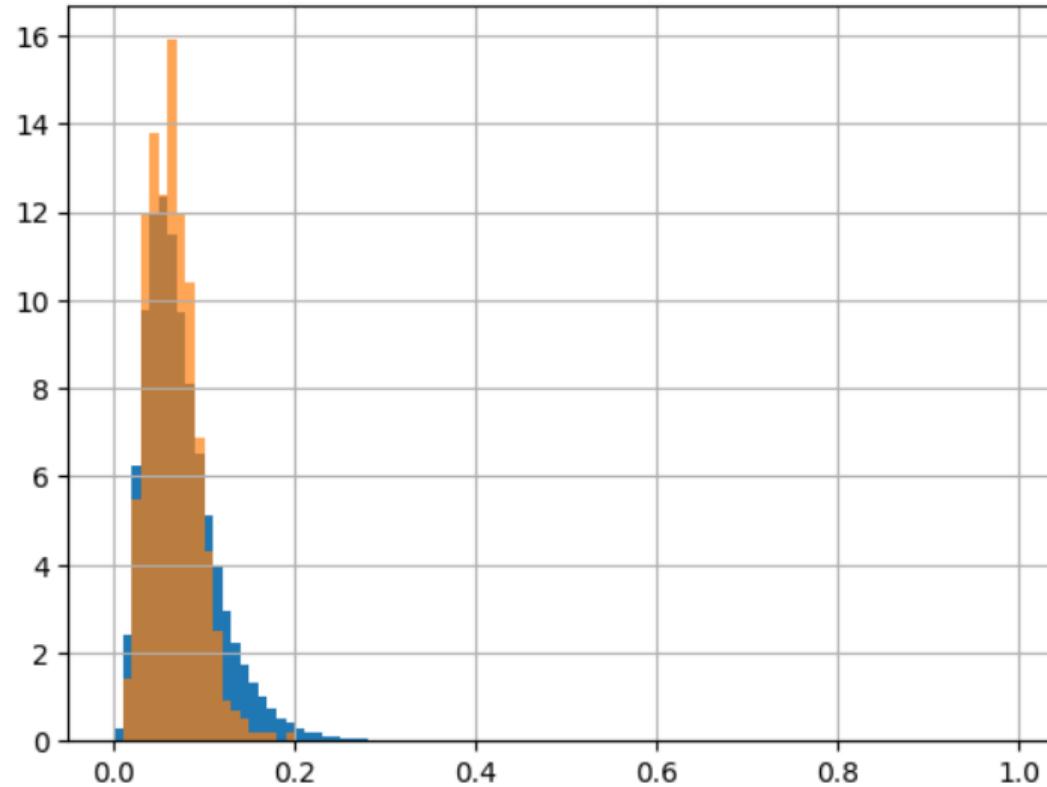
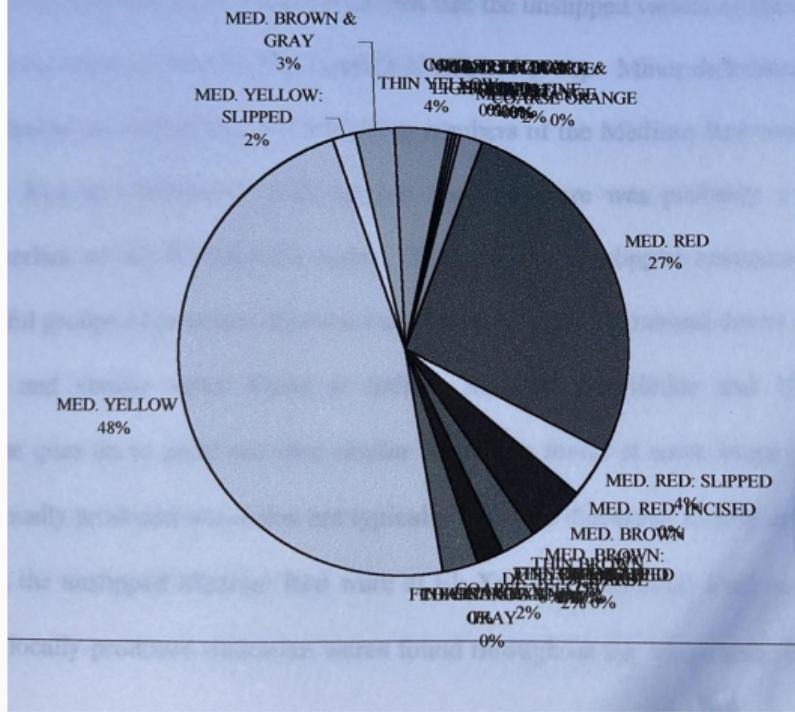


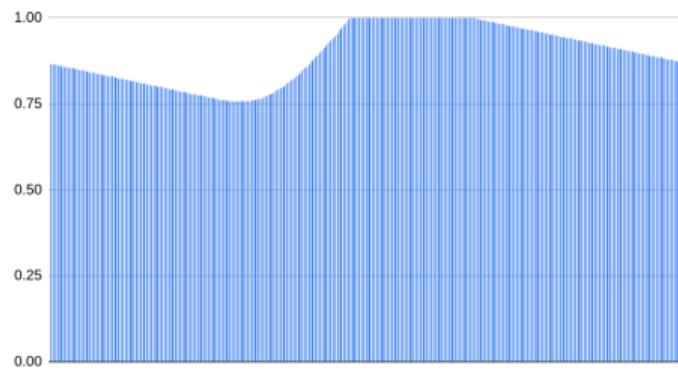
Figure 49: Muklebal Tzul ceramics (total)



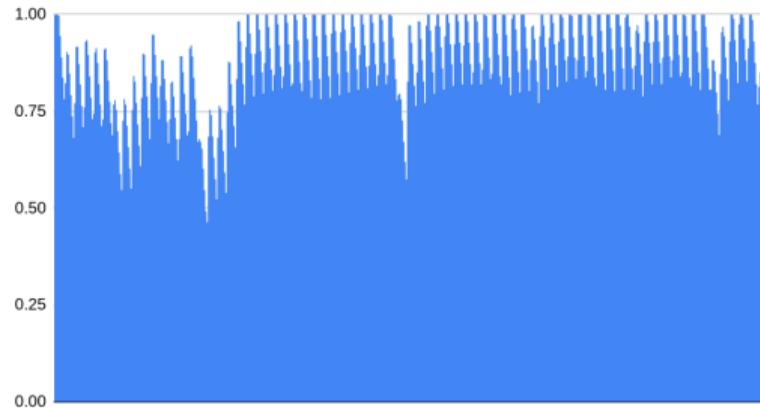


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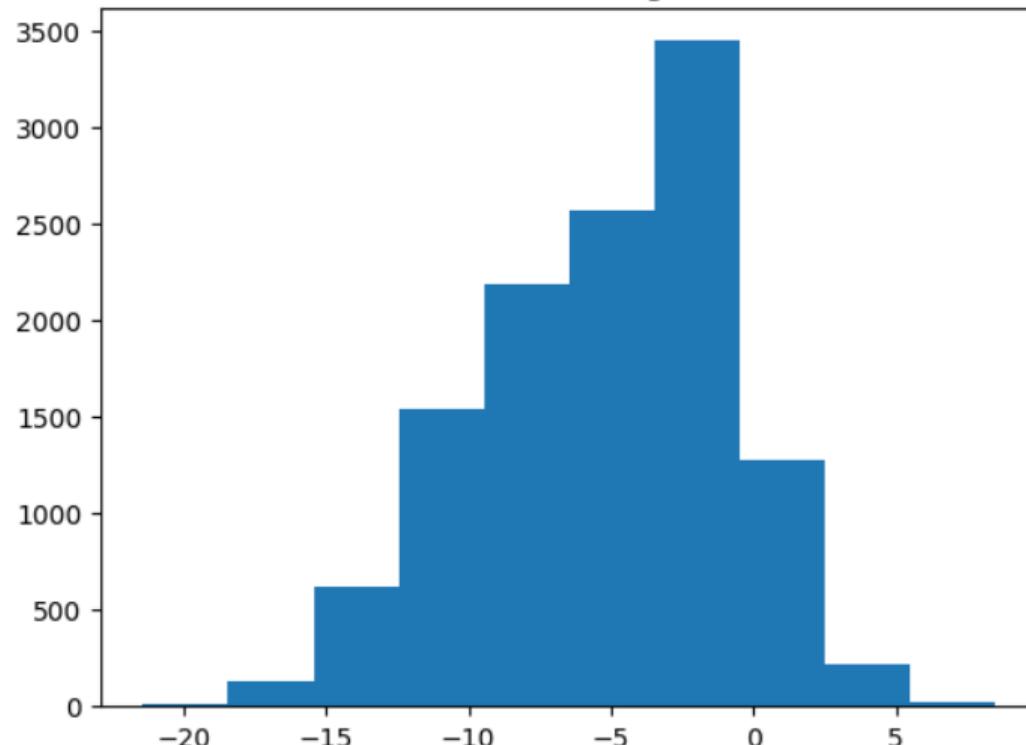
Percent Charge Over 1 Day



Percent Charge Over 3 month Period



### XC Confidence Change Percent



What are some tools you can use to make nice graphs?

## What are some tools you can use to make nice graphs?

- matplotlib
- seaborn
- bokeh
- plotly
- pandas

## Ways to make plotting easier

- Use Jupyter notebooks
- Separate data processing and visualization
- Save intermediate data
- Save final figures to disk (png/svg)
- Do all of the resizing/rendering in the chart generation