Dataviz

Plotivy

EXPLORE vs EXPLAIN your Data

Are you showing your audience the oysters or the pearls?

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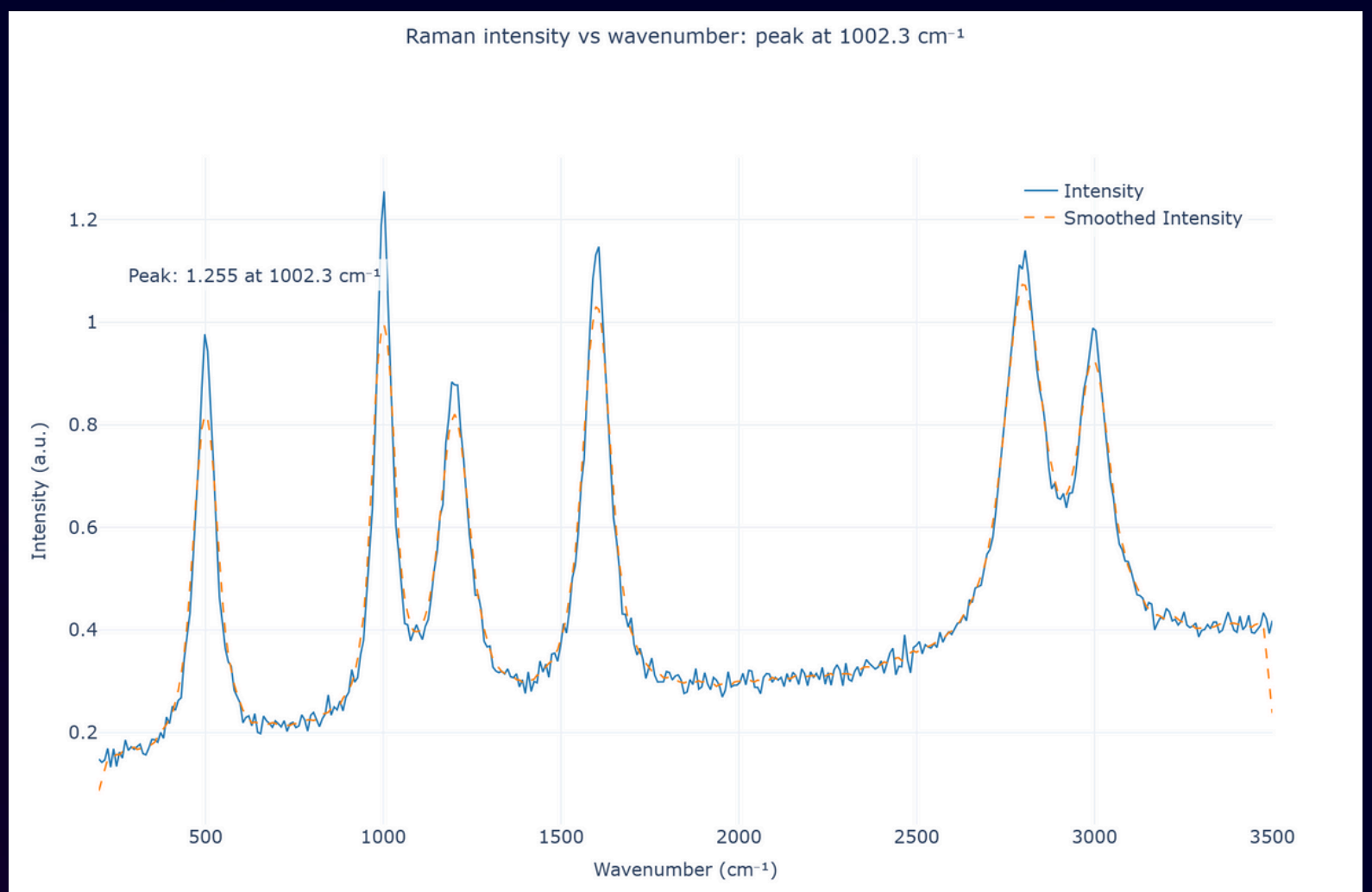
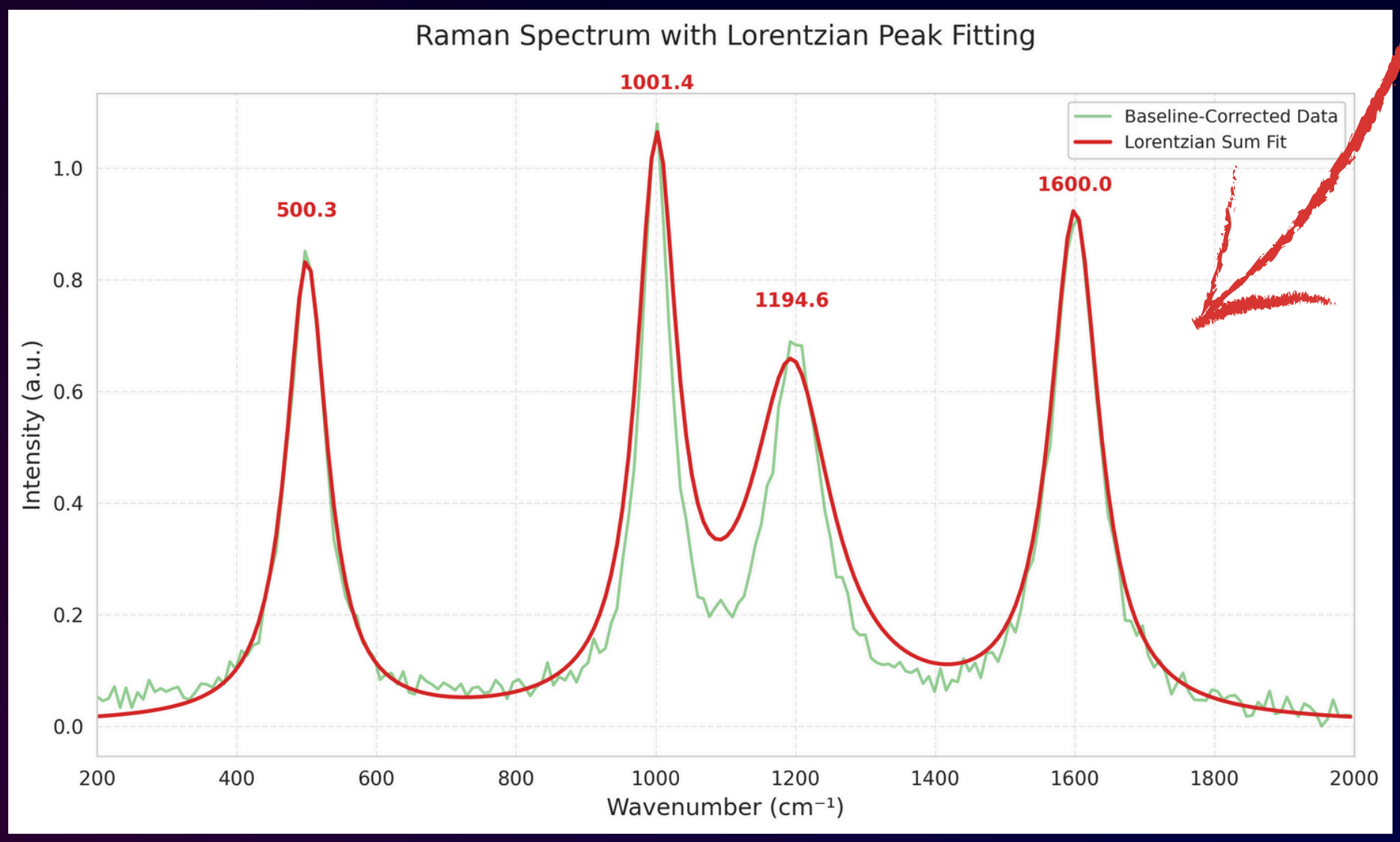
@Plotivy

From MESS



To MESSAGE



Data Visualization: Explorer vs. Explainer

The most common cause of ineffective data visualizations is confusing the private task of exploration with the public act of explanation.

Exploratory Analysis
(Finding the Story)

Audience: You, The Researcher

The goal is to understand the data, find patterns, check quality, and generate hypotheses.

Mindset: Speed and Volume

Make 100 quick plots to find one single insight; aesthetics do not matter yet.

The Analogy: Searching for Pearls

You crack open many “oyster shells” quickly to find the few that contain value.

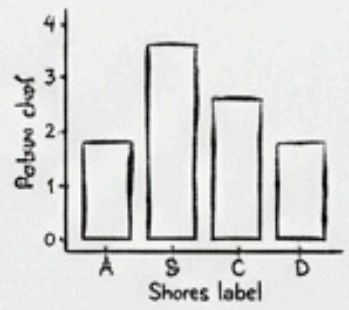
Explanatory Analysis
(Telling the Story)

Audience: Your Reader or Reviewer

The goal is to communicate a specific finding clearly and persuasively.

Mindset: Clarity and Precision

Design one perfect, clutter-free plot that tells the story instantly.



The Analogy: Making the Necklace

You polish the few pearls you found and arrange them into a beautiful presentation.

The Golden Rule

Only Show the "Pearls". Never show your exploratory plots in a paper or presentation; only show the final, polished result.

Oyster analogy from: https://www.storytellingwithdata.com

1) go to plotivy.app/analyze

2) upload your data

Imported Dataset

Ready for AI analysis · 400 rows × 3 columns

Show AI data assistant

Data Info

Edit Data

Search rows...

#	Wavenumber (cm^-1) float64	Intensity float64
1	200	0.148407022266352
2	208.2706766917293	0.1419067159902471
3	216.54135338345864	0.1467811853441811
4	224.812030075188	0.169272159728252
5	233.08270676691728	0.1324715757699141
6	241.35338345864665	0.1686639554839887
7	249.62406015037595	0.1338734166520144
8	257.89473684210526	0.1619862630182661

3) set interactive and write a simple prompt

Generate Visualization

Describe your desired

Your Prompt

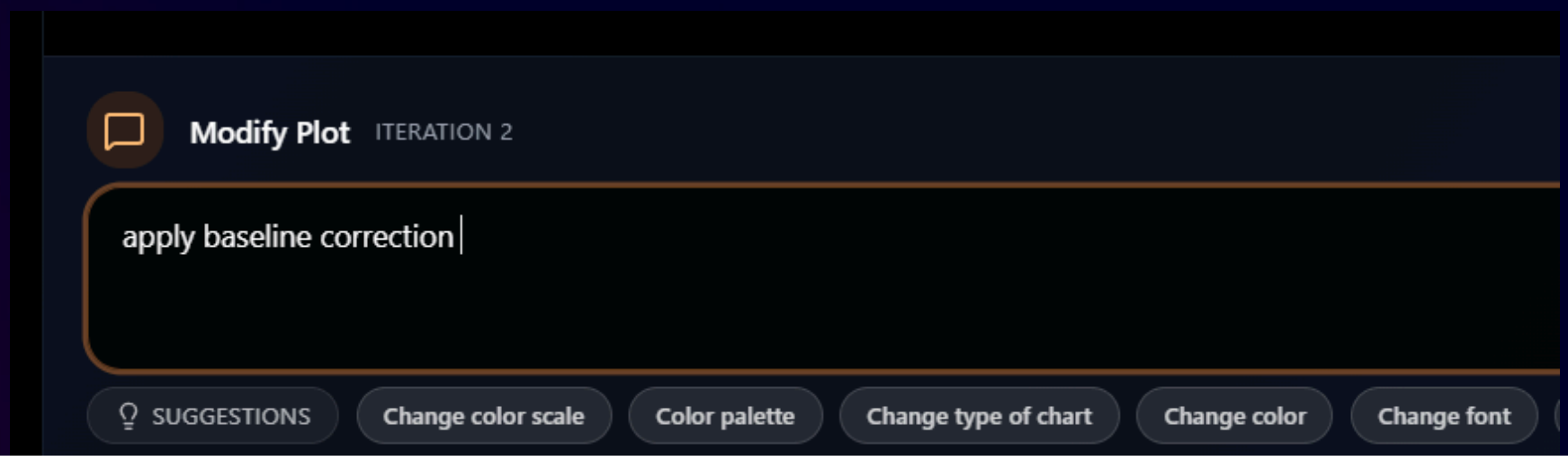
Plot Raman intensity vs wavenumber as a line plot.

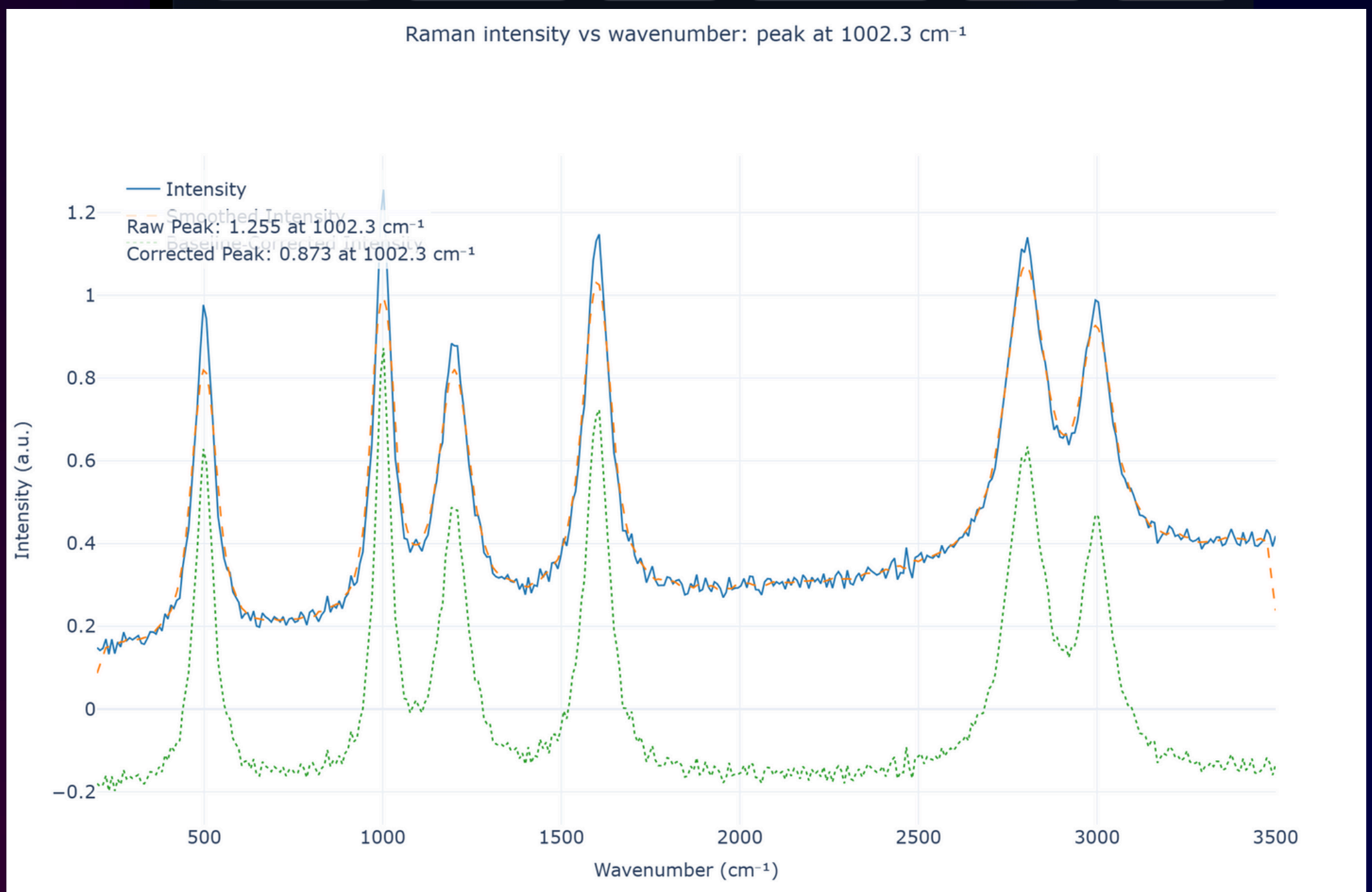
SUGGESTIONS | Color scale | Color palette | Type of chart | Color | Font

Generate Visualization

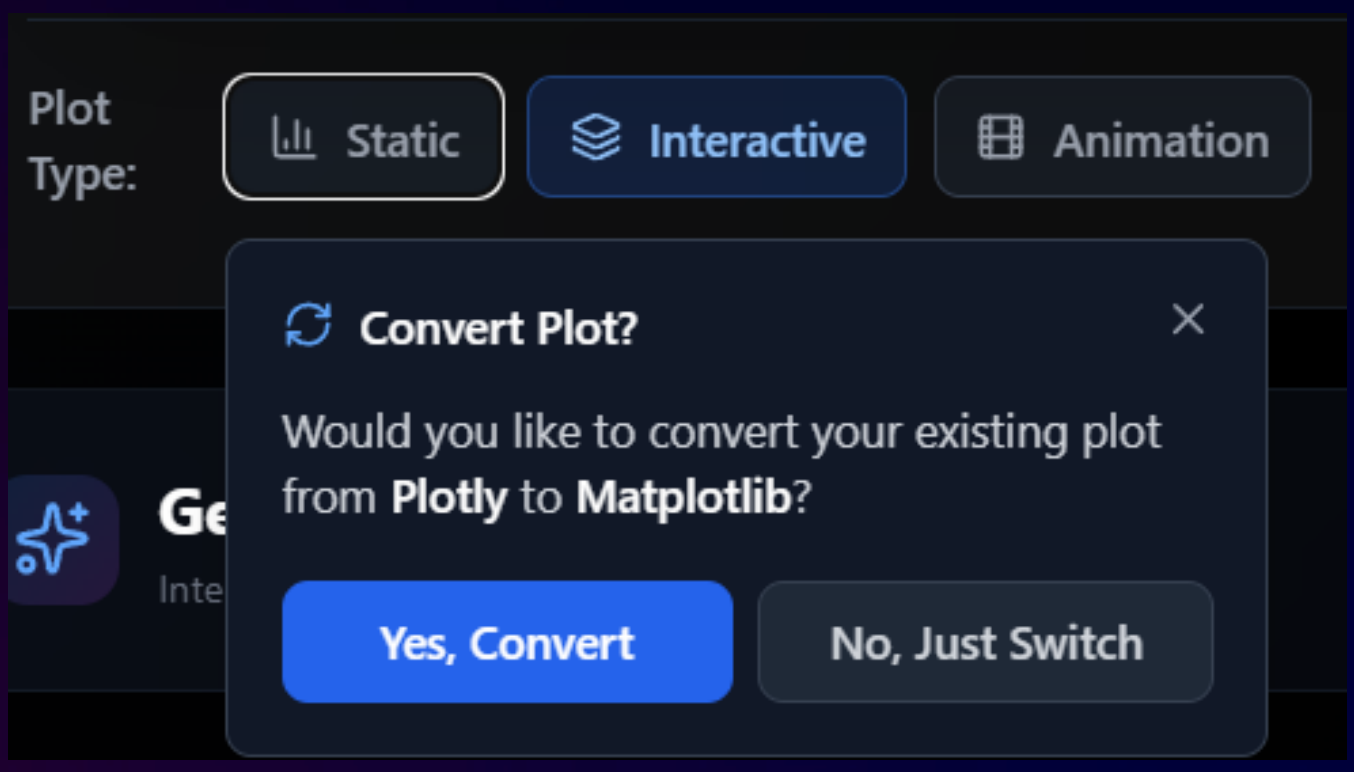
Plot Type: Static | Interactive | Animation

4) zoom, interact with your plot and ask modifications

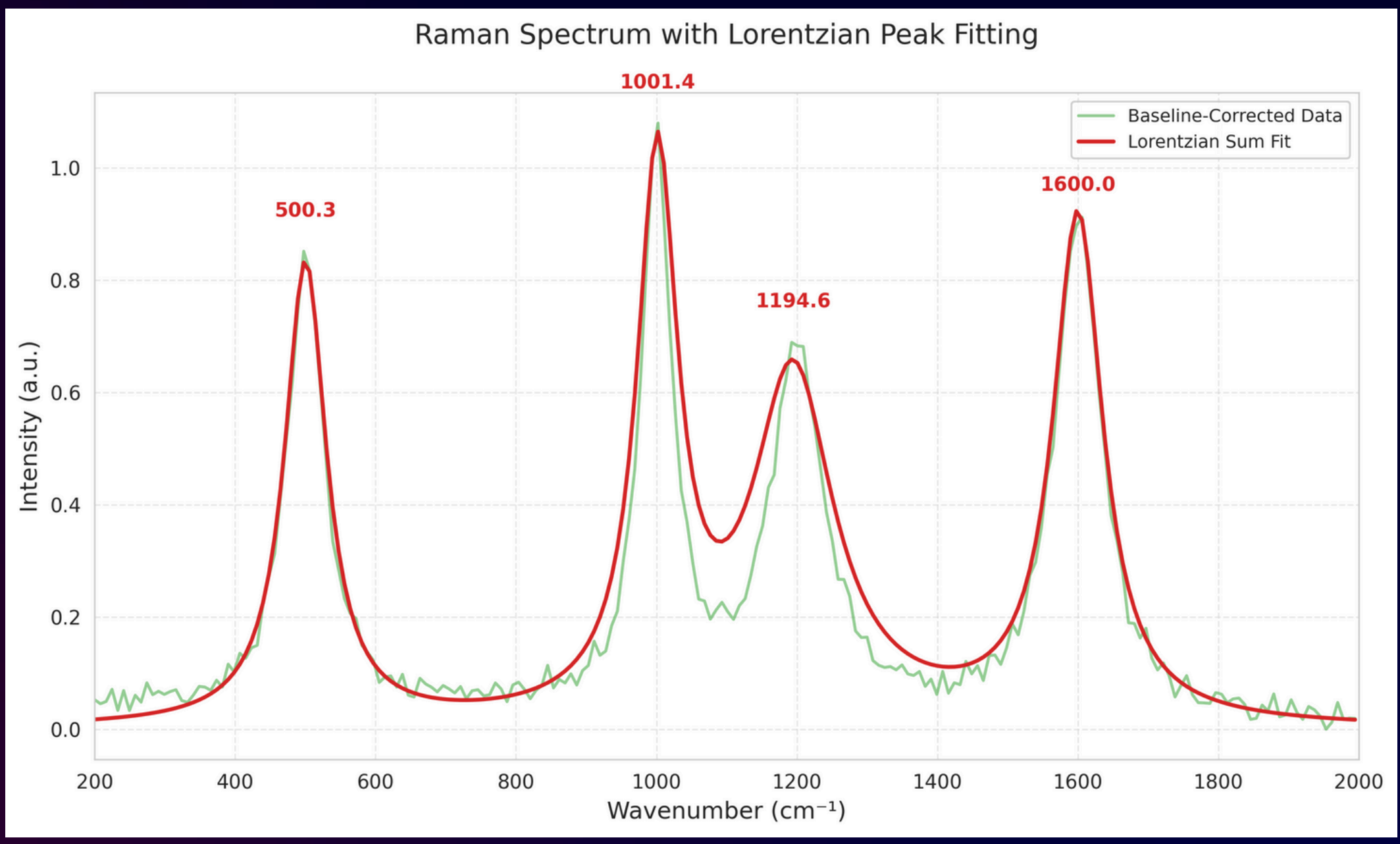




5) when you found your message, convert to STATIC and start EXPLAINING



6) Polish it, declutter it, communicate it



Explore Plotivy's gallery with over 58 chart options to guide you through deeper exploratory analysis.

Chart Gallery

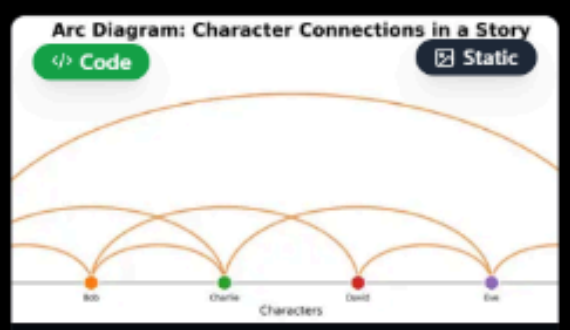
Explore 58+ scientific visualization types. Each chart includes Python code examples, usage tips, and interactive demos powered by Matplotlib, Plotly, Seaborn, and more.

Search charts, libraries, use cases...

All (58) Static (45) Interactive (13)

All | Time Series | Comparison | Distribution | Geospatial | Hierarchical | Diagrams | Statistical

Showing 58 of 58 chart types



Diagrams

Arc Diagram

Visualizes connections between nodes placed along a single axis using semicircular arcs.

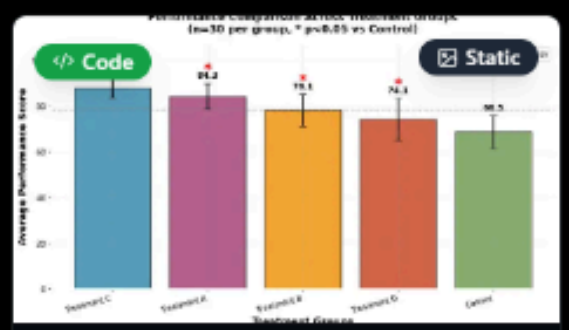
nxviz | matplotlib | networkx

Time Series

Area Graph

Displays quantitative data over time, emphasizing the magnitude of change with filled regions.

matplotlib | pandas | plotly

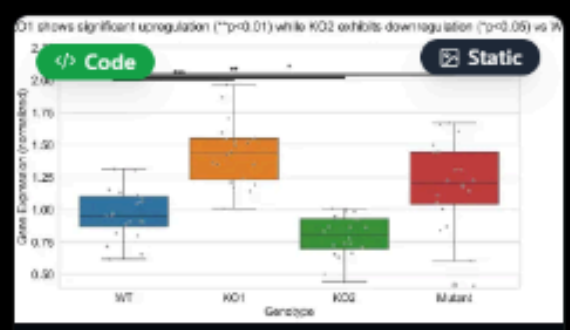


Comparison

Bar Chart

Compares categorical data using rectangular bars with heights proportional to values.

matplotlib | seaborn | plotly

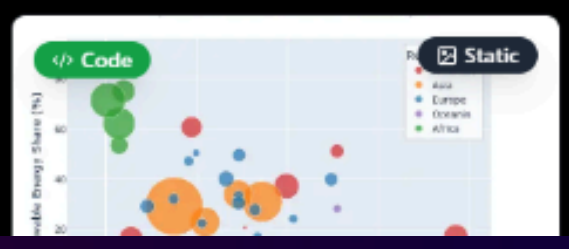


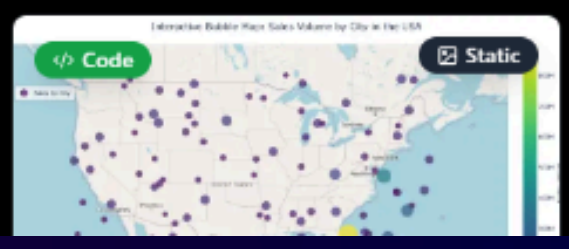
Distribution

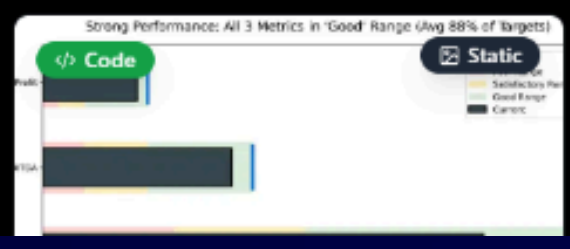
Box and Whisker Plot

Displays data distribution using quartiles, median, and outliers in a standardized format.

seaborn | matplotlib | plotly

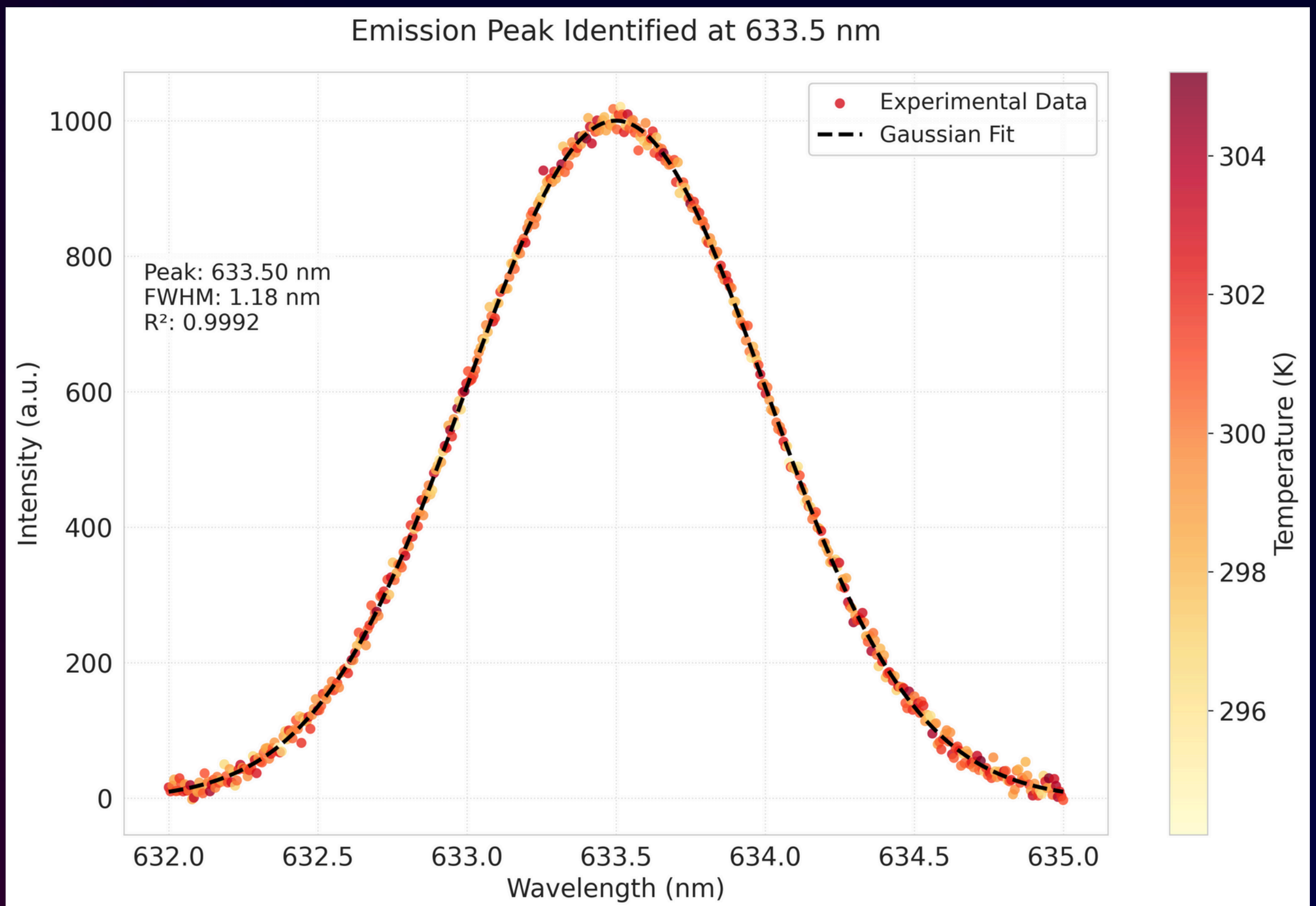






plotivy.app/charts

Then, create in just a few steps a beautiful visual that makes your results easy to understand.



plotivy.app/analyze

Dataviz

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Interested in more visual insights on Data Analysis and Visualization?

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www.plotivy.app