

# Interactive Data Visualization in Python

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Materials on GitHub- use search bar, enter user:luetgert

# Plan for Today

We will explore interactive data visualization in Python with a focus on the Bokeh library.

1. Download Anaconda (prior to this section)
2. Quick review of Jupyter Notebook and Markdown
3. Install libraries
4. Import data
5. Plot data and export

# Why Python?

## Web integration

- Python integrates exceptionally well into web APIs and interactive interfaces

## Intuitive Syntax

- Python libraries lead to fast, impactful and professional visualizations.

OS independent, large user base, extensive libraries

# Plotting Libraries

Interactive data visualization in Python has been revolutionized by three central libraries.

1. **Seaborn**-Released 2013, regularly expanded. Powerful package for beautiful, complex plots. Exceptional documentation at <https://seaborn.pydata.org>
2. **Plotly**- Professional interactive plots with hover points, legends and layering. Built on top of JavaScript. Integrates easily with Dash for customizable APIs, sliders, etc. <https://plotly.com/python>
3. **Bokeh**- Quick, elegant interactive plots. Open source. Well documented. Easy install. Fast, professional results. <https://docs.bokeh.org>

# Getting Started

After you have downloaded and installed Anaconda, we will install the Bokeh library and all dependencies.

There are multiple ways to install Bokeh. The easiest way is to enter this command at a Bash or Windows command prompt: **conda install bokeh**

This installs all the dependencies that Bokeh needs. Anaconda minimizes installation effort on all platforms and configurations, including Windows, and also installs the examples into the **examples/** subdirectory of your Anaconda or Miniconda installation directory.

You could use a pip install if you are confident that you have installed NumPy and Pandas. This will not install the examples or sample data files.