



OPEN ACCESS WEEK



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Python for Data Visualization

Coding with Jupyter Notebook for Reproducible Research

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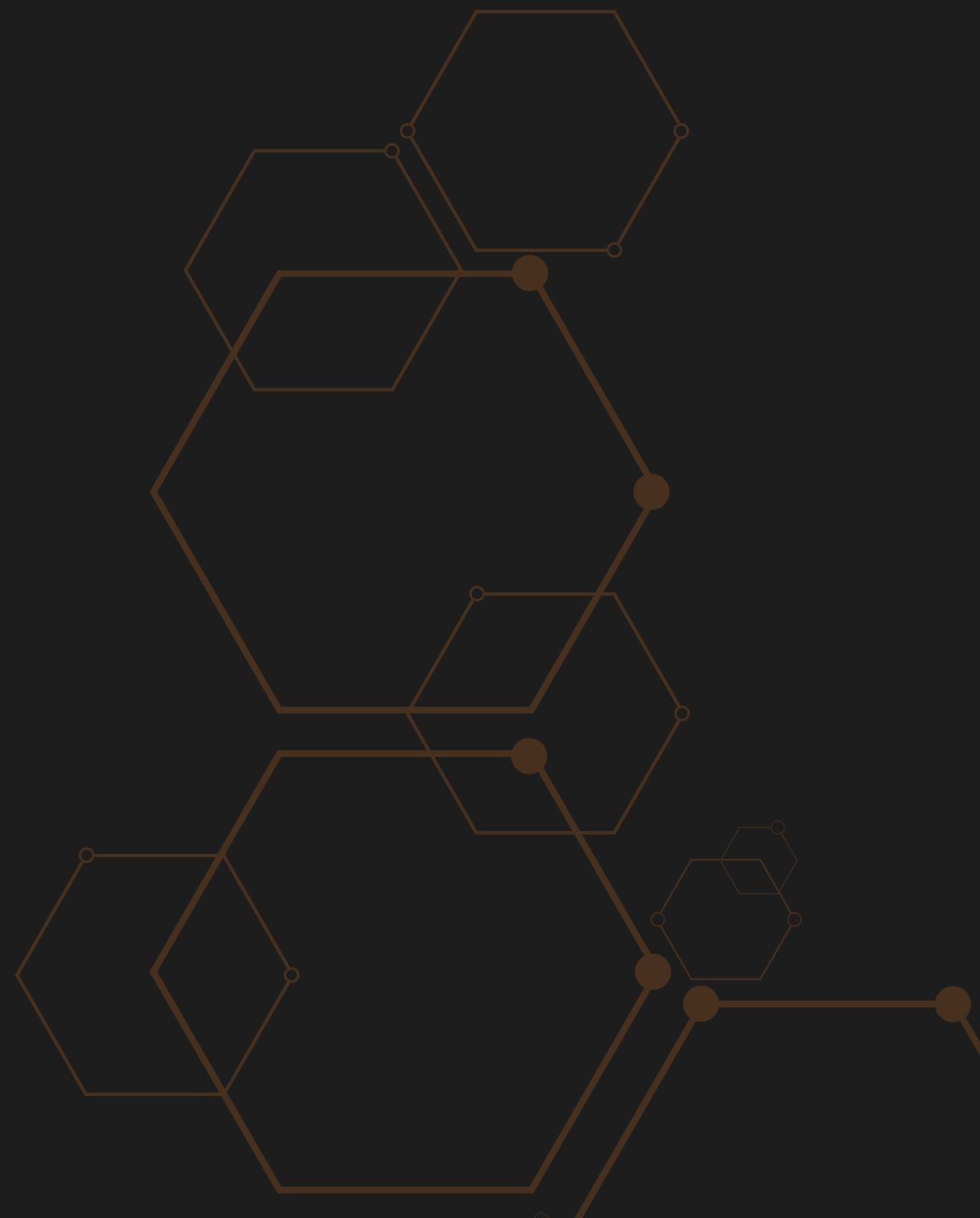
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- Research and Computational Data Management
- Resources

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Introduction

Why Data Visualization?

Interactive visualizations allow users to explore the data from different angles, uncovering insights that might be missed with static tables or text-based reports.

[Example](#)

Objectives

- ✓ Create plots using pandas, matplotlib and seaborn
- ✓ Import pyplot from the matplotlib library
- ✓ Customise and save plots
- ✓ Feel confident on your coding skills



Jupyter Notebooks and Reproducible Research

Reproducible Research using Python

Reproducible research involves creating workflows that can be easily shared, understood, and replicated.

How Jupyter Notebook can facilitate reproducible research?

It provide a powerful platform for conducting and sharing reproducible research in Python.





Key Libraries

01

Pandas

Pandas will provide you data structures, like Data Frames, for data manipulation, cleaning and analysis.

02

NumPy

Used for numerical computing. It provides an easy way to handle and manipulate large datasets

03

Matplotlib

A versatile library for creating interactive plots, that gives you control over visual elements like axes, labels, and styles for a wide variety of chart types.

04

Seaborn

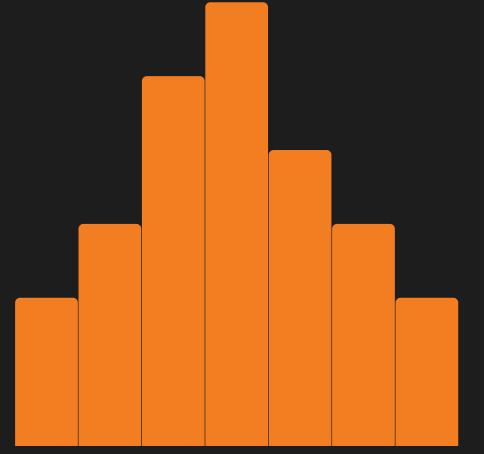
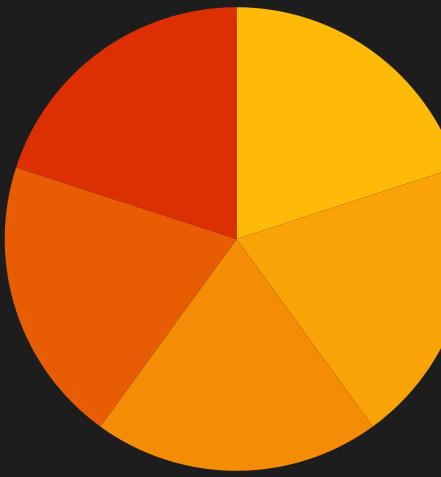
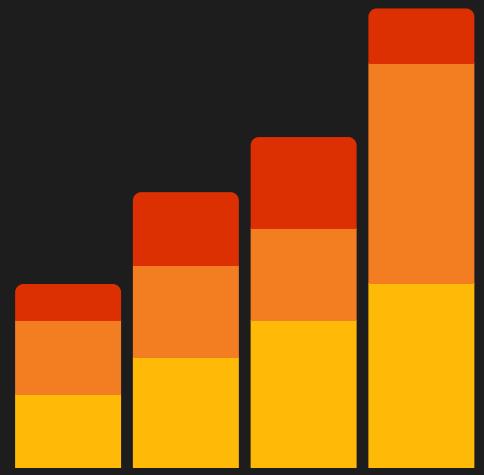
With default themes and settings, you can build on top of Matplotlib amazing visualizations that are easy to interpret.





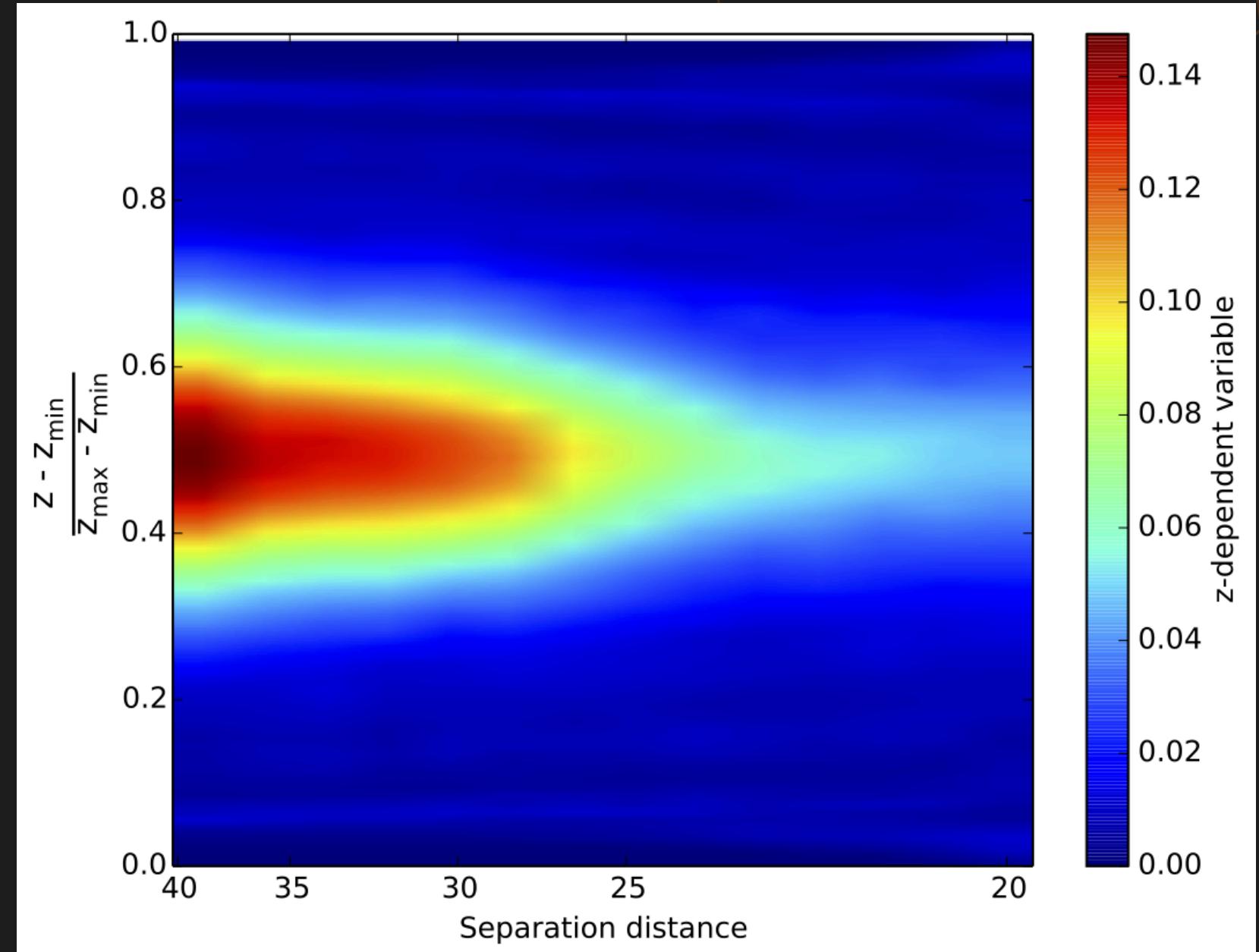
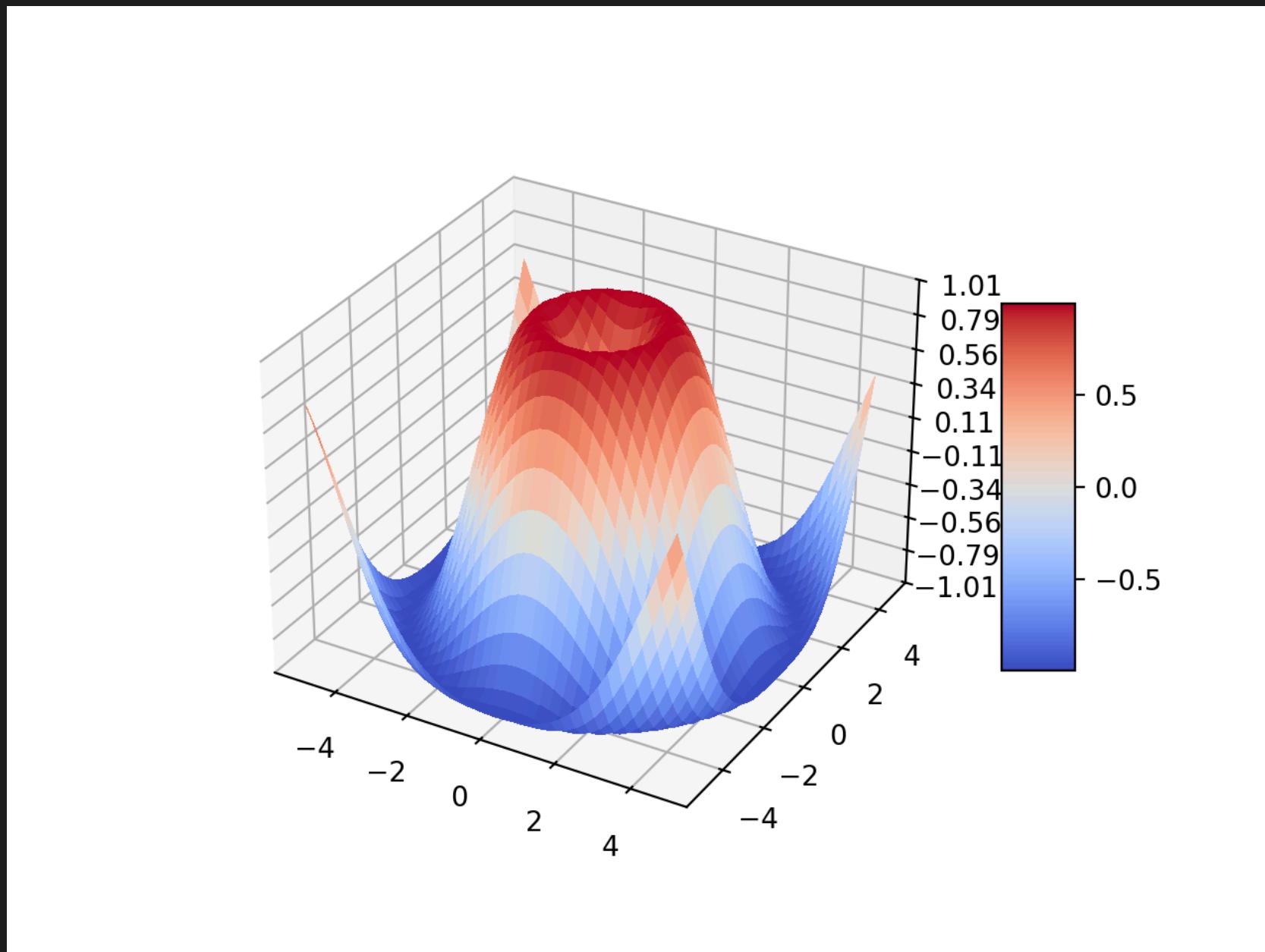
Types of Visualizations

With Python, you can create from simple and clean visualizations...





... to more complex and advanced ones!





Live Coding Setup

Time to put your hands-on!

Let's move to JupyterLab and start doing some coding!

JupyterLab

Your fav' drink

Your cat/dog's photo

PYTHON





Python for Data Visualization

Get inside!

RCDM

Meet our Team!

Join us in the Data Studio @ Main for one-on-one data consultations to answer questions about your research projects!

R Programming

Next events

Never miss our seminars on timely research topics, workshops designed to develop your data science, GIS mapping, and data visualization skills

P Y T H O N

Scholarly Communication

GIS





Thank you!

Keep working!

Coding is a skill that gets better with practice. Keep working and reach out to us whenever you need.

RESEARCH AND COMPUTATIONAL DATA MANAGEMENT

300 Main Library
320 S. Jackson St.
Athens, GA 30602





1854 Broad Street Cholera Outbreak Map

One Of The Best Data Visualization Examples From History & Today

John Snow used small bar graphs on city blocks to mark the number of cholera deaths in each household in a London neighborhood.

When applied to the wider trend of London cholera outbreaks, this finding helped trace a clearer line between the sickness and contaminated water wells.

[Back](#)

