CS3101

Exploring Python Packages

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Exploring Python Packages on GitHub

- GitHub is a valuable resource for discovering new Python packages, and probably the **main** location to watch change happen.
- Many projects are open-source, so get ting a feel for how to navigate and use GitHub might help you down the line.
- Just about every Python package gets distributed on the Python Package Index (or PyPI).
- It is not easy to search on PyPI for new packages – GitHub is much better.

We'll discuss some ways to search for Python packages or repositories more generally.

Searching on GitHub

GitHub has a powerful search feature that allows you to find repositories containing Python packages. To search for Python packages:

- Go to the GitHub homepage.
- In the search bar, type your query followed by `language:python` to filter for Python repositories.
- You can further narrow down your search by using filters such as stars and topics.

Example search: `data visualization language:python`

Browsing Trending Repositories

GitHub's trending repositories section is a great place to discover popular Python packages. To access trending repositories:

- Go to the GitHub homepage.
- Click on the "Explore" dropdown in the top navigation bar.
- Select "Trending" to see the most popular repositories across various languages, including Python.

Exploring Python Topics

GitHub allows users to tag repositories with topics, making it easier to discover packages related to specific domains or technologies. To explore Python topics:

- Go to the GitHub homepage.
- Click on the “Explore” dropdown in the top navigation bar.
- Select “Topics” and then click on “Python” to see repositories tagged with the Python topic.

Some example GitHub repos

All of the software we've used (after the LaTeX discussion) exists on GitHub.

- Python
- NumPy
- Matplotlib
- pandas
- SageMath

One package I want to mention given one of the themes of our module:

- Manim : Animation engine for explanatory math videos.

They have lots of examples.

I copied their Sine Curve Unit Circle example.

Check out:

- `manim_code.py`
- `SineCurveUnitCircle.mp4`