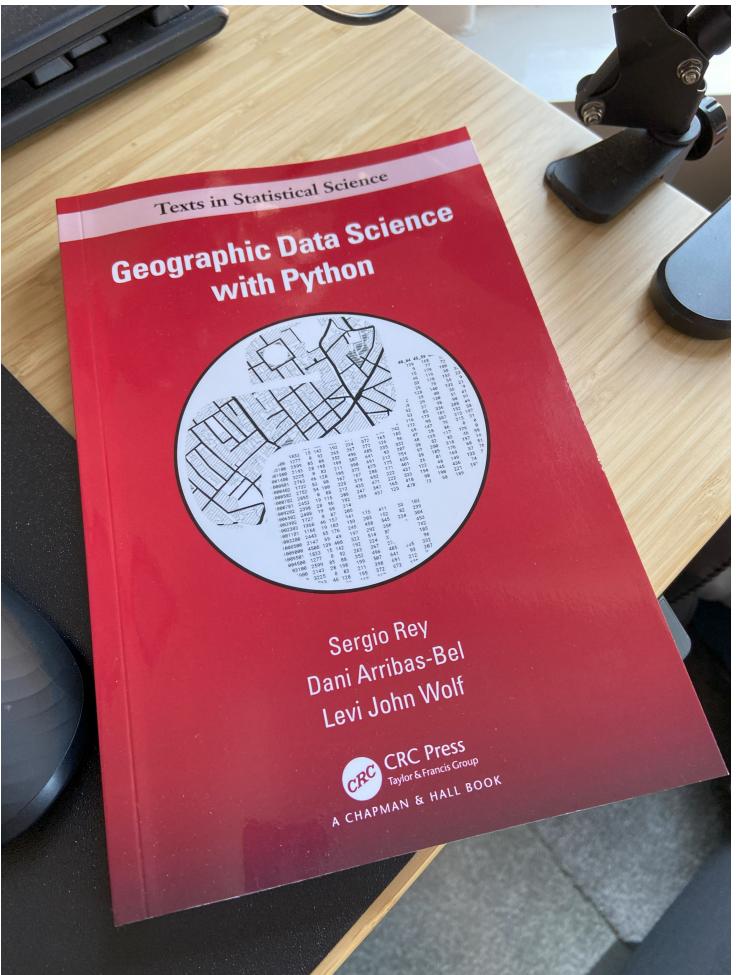


Geographic Data Science with Python

The Book

Dani Arribas-Bel

It's a book you can buy!



But also...

For free forever at:

- <https://geographicdata.science>
- [!\[\]\(746d018fdf6ab02bf5fb7681133e8b29_img.jpg\) launch binder](#)
- <https://github.com/gdsbook/book>



The Authors



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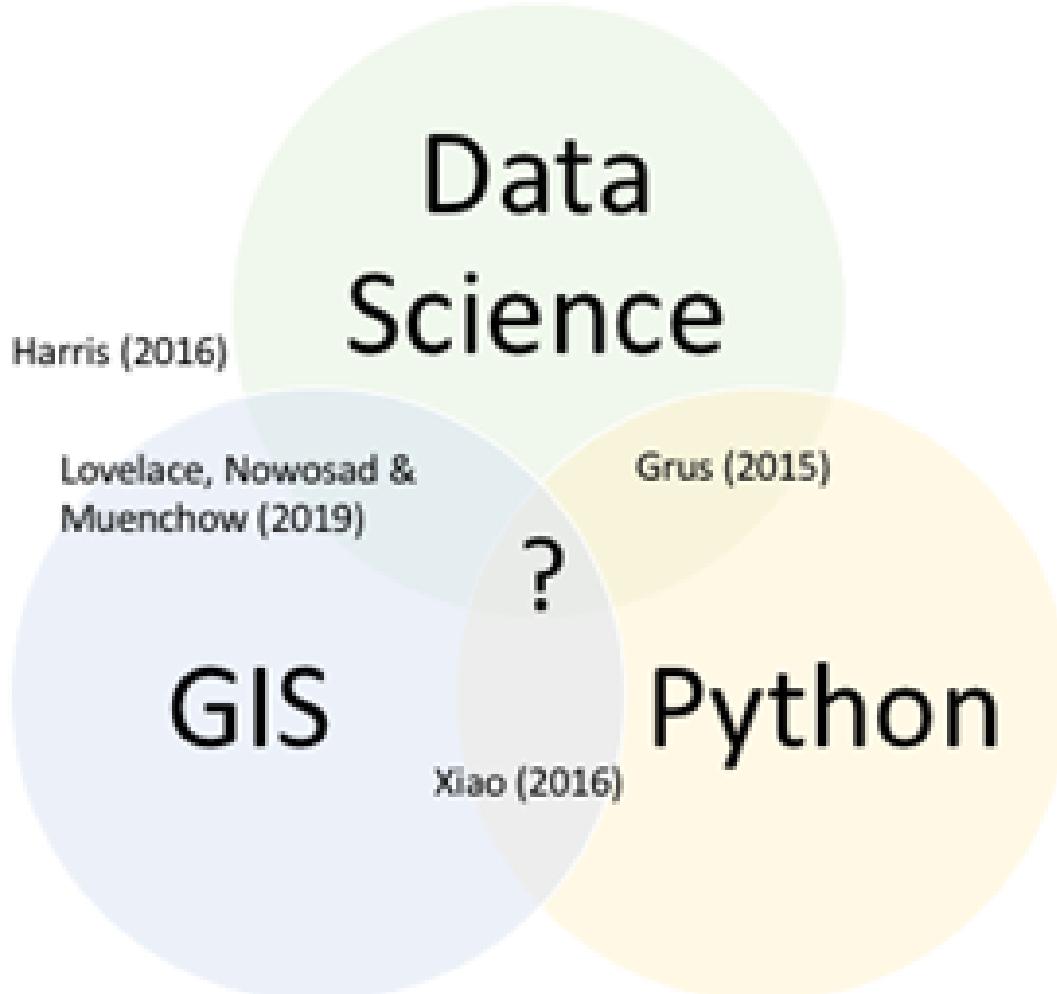
Dani Arribas-Bel



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Levi Wolf

The Book is...



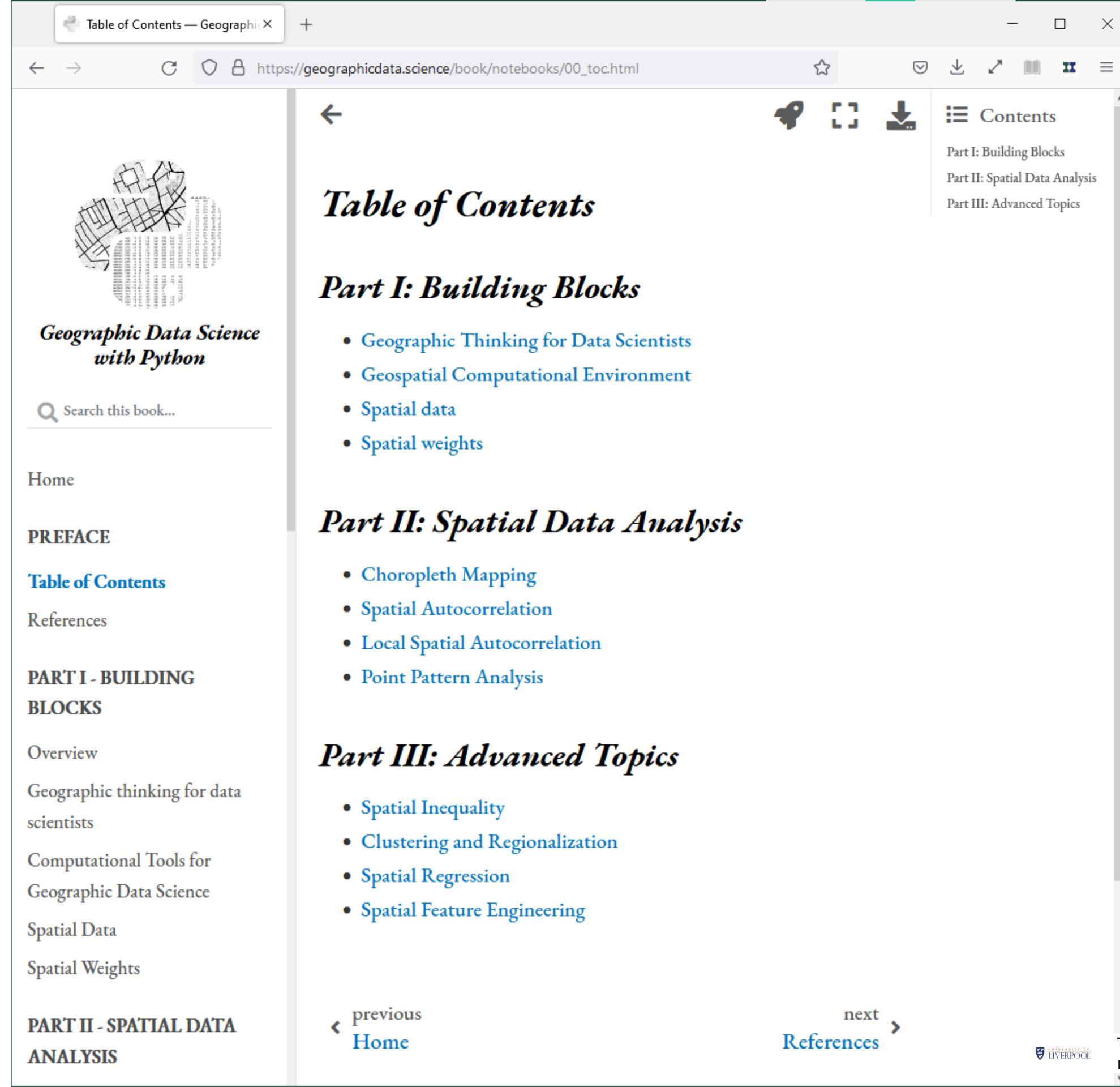


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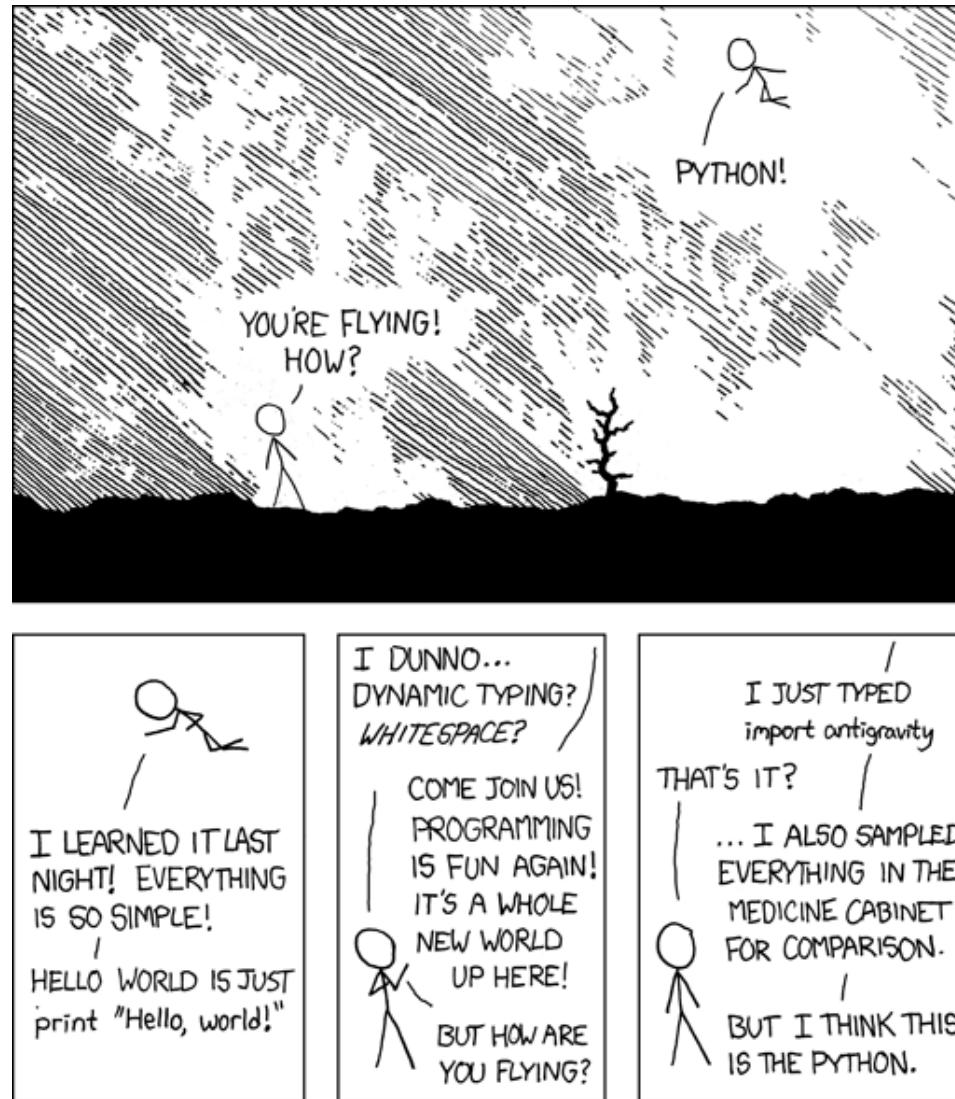
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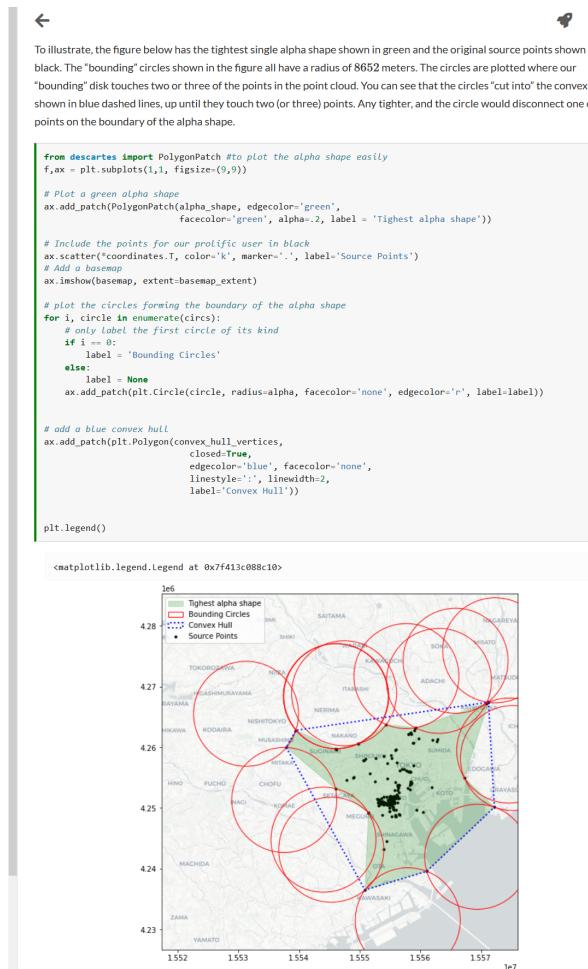
Source

Radically Open

The image displays three side-by-side screenshots illustrating the open nature of the book's resources:

- Left Screenshot (Static Website):** Shows the "Welcome!" page for "Geographic Data Science with PySAL and the PyData Stack". It features a "Welcome!" section, a "Latest news" section with entries from Oct 30, 2020, and Aug 29, 2019, a "Work in progress..." section with "Hello world!!!", and a "Subscribe" button.
- Middle Screenshot (GitHub Repository):** Shows the GitHub repository for the book. It displays the repository's main page with a list of files and commits. Key commits include "actions-user GA build of book HTML" (12 days ago), "Merge pull request #102 from ijwolf/ch2" (12 days ago), and "update spatial data chapter with additional structure" (12 days ago).
- Right Screenshot (GitHub Commit History):** Shows a detailed view of the GitHub commit history. It lists commits grouped by date: Nov 6, 2020, Oct 21, 2020, Oct 16, 2020, and Sep 21, 2020. Each commit includes details like author, message, date, and a link to the commit page.

Code as text; text as code



The figure shows a screenshot of a Jupyter notebook from the 'Geographic Data Science with Python' book. The notebook displays a map of Tokyo with several spatial features overlaid: a green polygon representing the 'Tightest alpha shape', several red circles representing 'Bounding Circles', a blue dashed polygon representing the 'Convex Hull', and black dots representing 'Source Points'. A legend in the top right corner identifies these elements. The code in the notebook plots these shapes and labels them.

```
from descartes import PolygonPatch #to plot the alpha shape easily
f,ax = plt.subplots(1,1, figsize=(9,9))

# Plot a green alpha shape
ax.add_patch(PolygonPatch(alpha_shape, edgecolor='green',
                           facecolor='green', alpha=.2, label = 'Tighest alpha shape'))

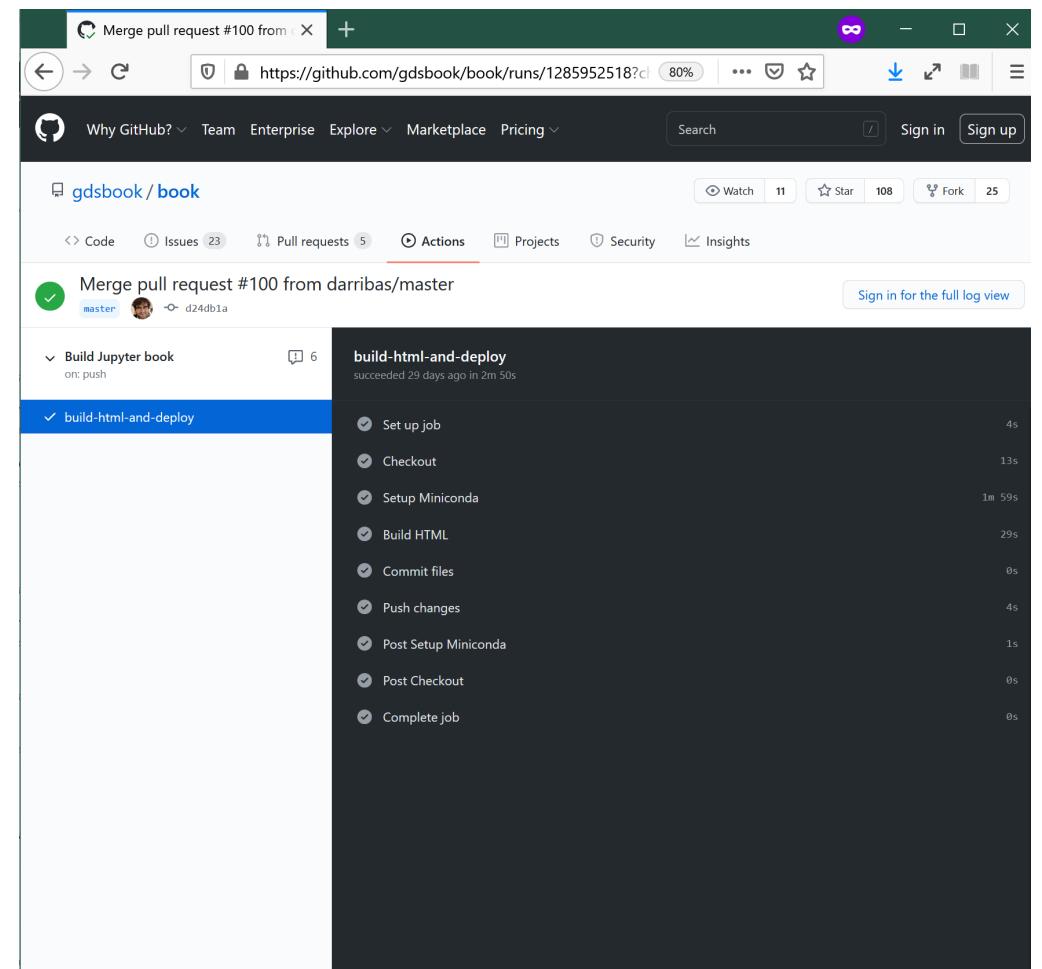
# Include the points for our prolific user in black
ax.scatter(*coordinates.T, color='k', marker='.', label='Source Points')

# Add a basemap
ax.imshow(basemap, extent=basemap_extent)

# plot the circles forming the boundary of the alpha shape
for i, circle in enumerate(circles):
    # only label the first circle of its kind
    if i == 0:
        label = 'Bounding Circles'
    else:
        label = None
    ax.add_patch(plt.Circle(circle, radius=alpha, facecolor='none', edgecolor='r', label=label))

# add a blue convex hull
ax.add_patch(plt.Polygon(convex_hull_vertices,
                        closed=True,
                        edgecolor='blue', facecolor='none',
                        linestyle='--', linewidth=2,
                        label='Convex Hull'))


plt.legend()
```



The figure shows a screenshot of a GitHub pull request merge page. The URL is https://github.com/gdsbook/book/runs/1285952518?check_suite_focus=true. The page displays a list of build steps for a 'Jupyter book' build. The steps include setting up the job, checking out the code, setting up Miniconda, building HTML, committing files, pushing changes, post-setup miniconda, post-checkout, and finally completing the job. The status of each step is shown as a checkmark.

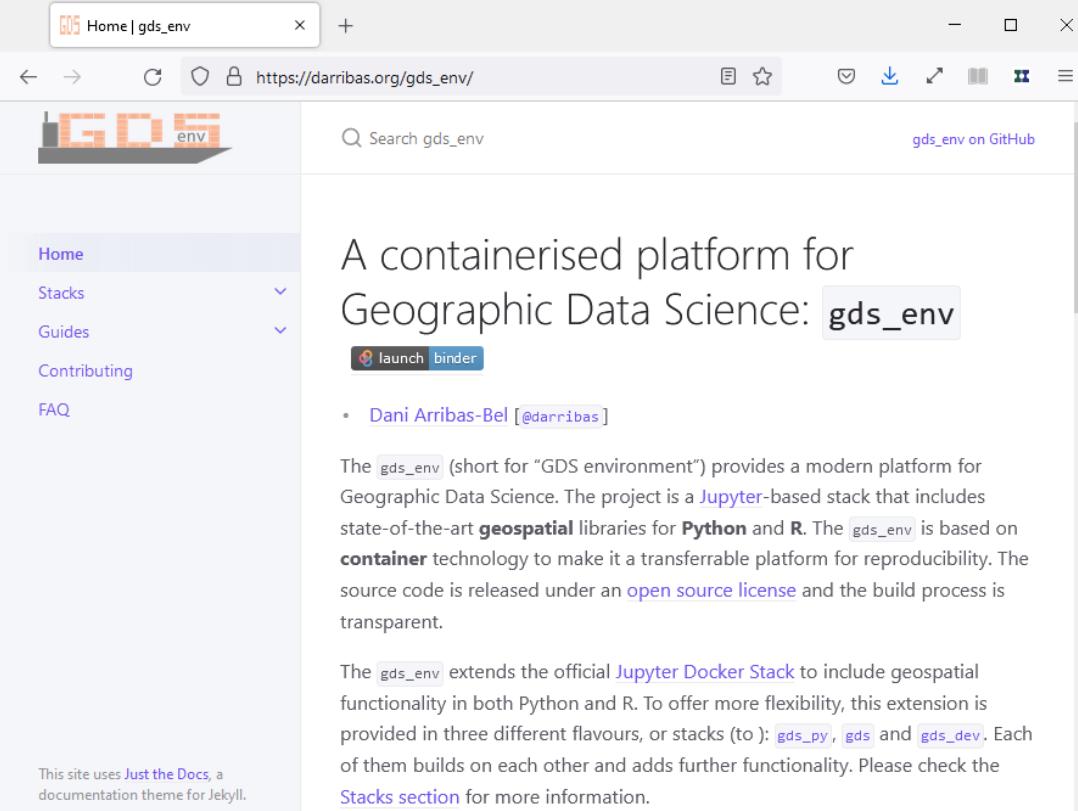
Merge pull request #100 from darribas/master

Build Jupyter book

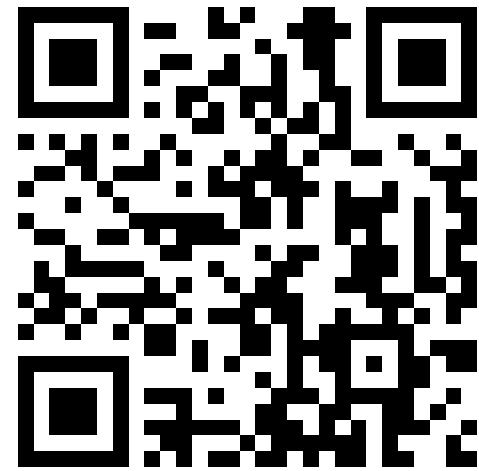
build-html-and-deploy

- Set up job
- Checkout
- Setup Miniconda
- Build HTML
- Commit files
- Push changes
- Post Setup Miniconda
- Post Checkout
- Complete job

Runs *anywhere...*



A screenshot of a web browser window displaying the `gds_env` project page at https://darribas.org/gds_env/. The page features a sidebar with links for Home, Stacks, Guides, Contributing, and FAQ. The main content area includes a search bar, a GitHub link, and a "launch binder" button. It describes `gds_env` as a containerised platform for Geographic Data Science, based on Docker and Jupyter, with state-of-the-art geospatial libraries for Python and R. It mentions the open source license and the build process. A note at the bottom indicates the site uses `Just the Docs`.



darribas.org/gds_env

Demo



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