

# GitHub For Planners



**GitHub**



**git**

APA

Tech



American Planning Association  
*Making Great Communities Happen*

# What is the American Planning Association?

## *About the American Planning Association*

- We are the oldest and largest community of domestic and international planners.
- We are an association, which means we exist to serve your needs—help you get hired, do better at your job, connect with others, and channel your voice into the planning conversation.
- We have 47 state or regional [chapters](#) and 21 interest- and population-specific [divisions](#). Many have student or young professional groups tailor-made for your involvement.

# What is the APA Technology Division?



***APA Technology Division*** consists of planners, technologists, and other APA Division members interested in how technology can assist in the planning design and decision-making process to create new opportunities to enhance public involvement, share information, and make more informed decisions in cities and towns throughout the country.

[Website](#)

[Facebook](#)

[LinkedIn](#)

# Upcoming Events

- NPC 2021
  - Planning Technology & The Future of your Career (Post NPC Webinar)
  - Annual Technology Division Meeting
- APA Elections – Technology Division Positions
  - Secretary & Chair
- Future Webinars
  - Topics on concerning AI, Equity, Engagement, and their connections to technology
- Continued Engagement on GitHub
  - Contribute to our repositories or suggest a project

## Introductions

# Presenters



David Wasserman, AICP  
Data Science Practice Leader



Marshall Ballard, GISP  
Data Liberator



## Introductions

# Outline

- Why talk about this?
- What is GitHub & Git?
- How do you navigate a repository?
  - 4 Examples
- Dialogue Through Issues
- Cloning A Repository
  - What is Markdown?
- Pushing Changes to a Repo
  - When you own it
- Pull Requests & Changes to Other's Repositories
  - When someone else does
- Process Demonstration
  - Repositories Owned by You
  - Repositories Owned by Others



<https://github.com/varoudis/depthmapX>

## Introductions

# Why talk about this?

- If we hear:
  - “Code is the new concrete”
  - “Data is the new oil”
- It might be a good idea of what the mixer & refineries look like



Source: [SpaceNews](#)

Why use Git?

# How can GitHub help planners & planning?

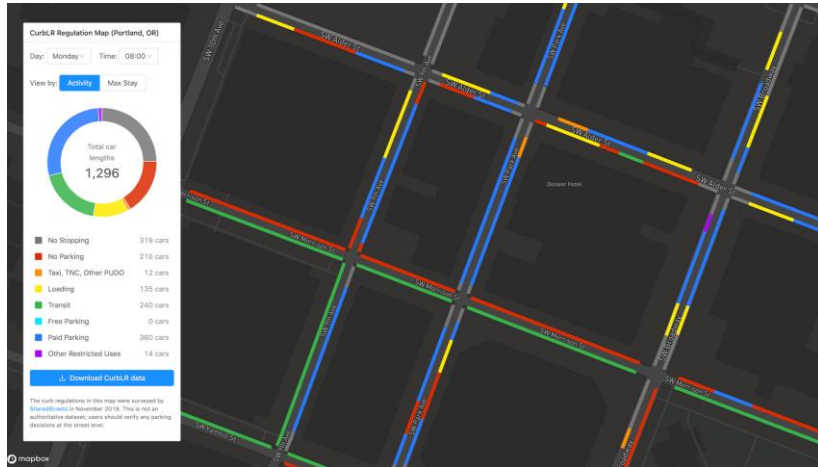
- There are lots of free tools & resources on the internet
- Provides a location for planners & technologists to collaborate
- You can create web hosted portfolios & basic web pages with GitHub
- Contemporary Transportation Technology uses Software
- Open Source Software enables bottom-up solutions to civic problems
- Cities are increasingly benefit from being digitally savvy to be in a post-pandemic world





## Examples

## Planning Repositories

[curblLR](#)

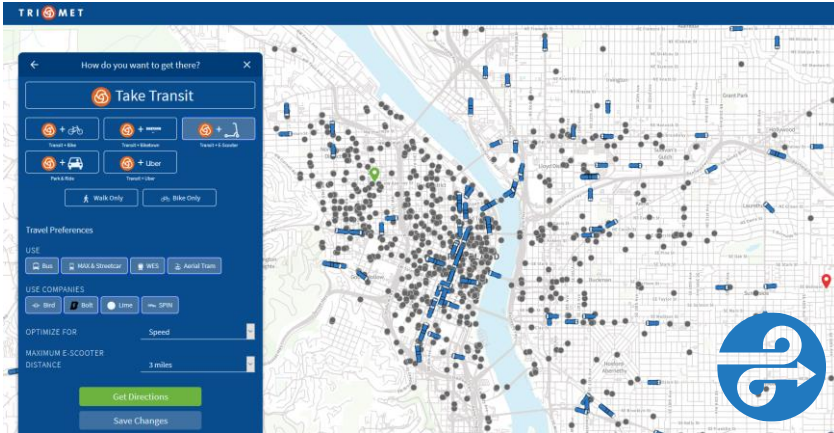
State	Number of Buildings	Unzipped MB
Alabama	2,460,404	526
Alaska	110,746	26

## First Stage - Semantic Segmentation

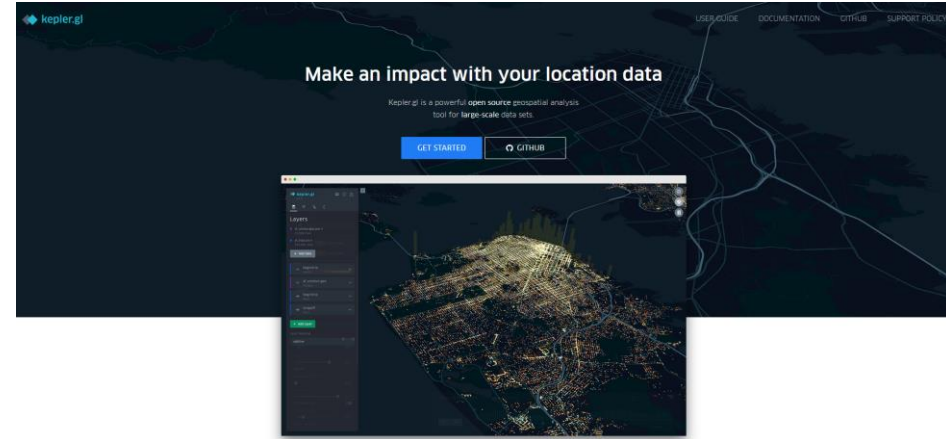
[USBuildingFootprints](#)

## Examples

# Planning Repositories



[Open Trip Planner](#)



[Kepler.gl](#)

[Urban Computing Landscape](#)

## Examples

# Planning Repositories



[StreetMix](#)



[Complete Street Rule](#)

What is it?

# Urban-and-Regional-Planning-Resources

How do we build something together?

APA-Technology-Division / urban-and-regional-planning-resources Public


Pin Unwatch 16 Fork 27 Starred 86

Code Issues Pull requests Discussions Actions Projects 1 Wiki Security Insights Settings


main 2 branches 0 tags

Go to file Add file Code

About

 d-wasserman	Fix IFC	✓ 89112ee 13 days ago	🕒 349 commits
📁 .github/workflows	Add Branch to Actions		11 months ago
📁 resources	updated flowchart		8 months ago
📄 .DS_Store	Added link to Accessibility Observatory data sets		2 months ago
📄 CONTRIBUTING.md	Update CONTRIBUTING.md		7 months ago
📄 LICENSE	Update LICENSE		13 months ago
📄 README.md	Fix IFC		13 days ago
📄 code-of-conduct.md	Create code-of-conduct.md		11 months ago

README.md

Urban & Regional Planning Resources  awesome

Community list of data & technology resources concerning the built environment and communities. 🏡 🌳 🚶



data awesome sustainability  
technology resources urban-planning  
planning awesome-list hacktoberfest  
communities planners built-environment  
regional-planning

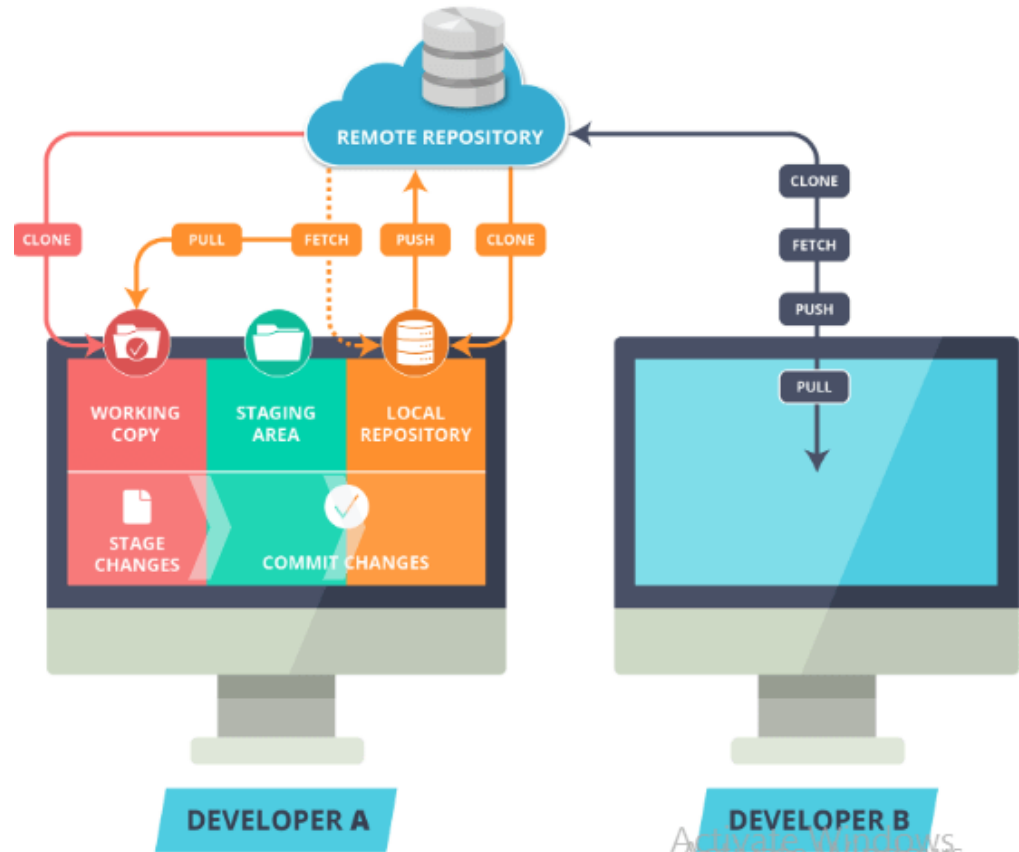
📖 Readme  
📄 CC0-1.0 License  
🛡️ Code of conduct  
⭐ 86 stars  
👁️ 16 watching  
🍴 27 forks

What is it?

# What is Git?

Git - is software for tracking changes in any set of [files](#) typically as part of the software development process.

- Developed in 2005 by Linus Torvalds (Linux OS Creator)





What is it?

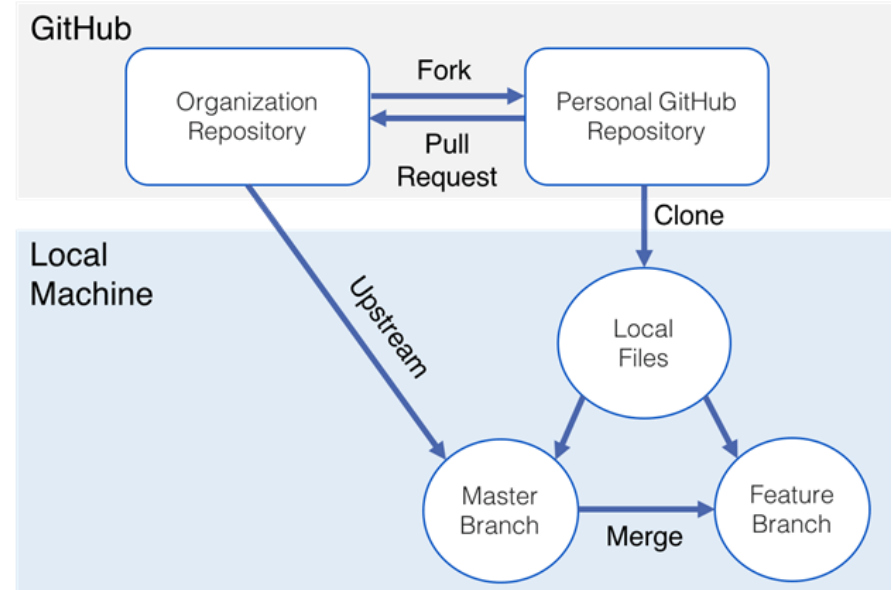
# What is Git?

- Distributed Version Control System- like track changes in MS Word, but for multiple files & folders
- Primarily used by software developers
- A layer on top of a filesystem that tracks changes to files and retains historical changes.
- Allows for variations of projects to be created and maintained.
- Single source of truth or record of a project.
- What are GitLab, GitHub, Atlassian?

What is it?

# What is GitHub?

- Microsoft subsidiary
- One of the largest development communities
- Cloud based Git resource



What is it?

# Terminology

- **Clone** - A clone is a copy of a repository that lives on your computer instead of on a website's server somewhere, or the act of making that copy
- **Commit** - A commit, or "revision", is an individual change to a file (or set of files)
- **Fork** - A fork is a personal copy of another user's repository that lives on your account
- **Push** - To push means to send your committed changes to a remote repository
- **Pull** - Pull refers to when you are fetching in changes and merging them

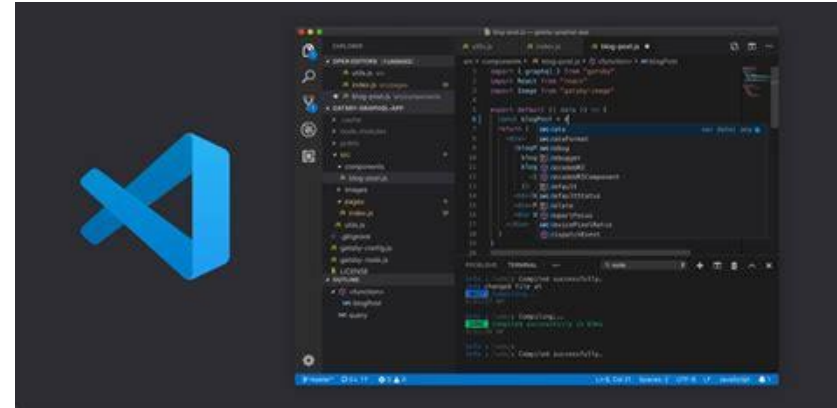
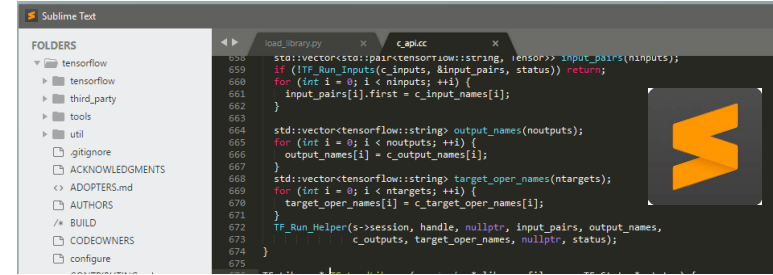
Taken From: <https://docs.github.com/en/github/getting-started-with-github/github-glossary>



## Examples

# Tools to use

- GitHub Desktop
- Git Bash
- Visual Studio Code, Sublime, Notepad++

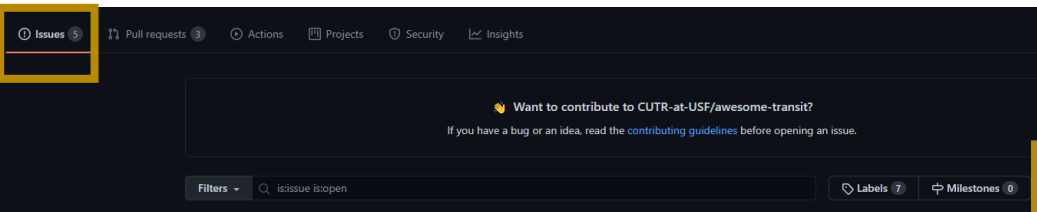


## Issues

# Talking to Issue Owners

- Filing an issue is a non-technical exercise that all planners can use to engage with technologists and exchange ideas
- Most repository owners respond favorably to well meaning questions & suggestions

Step 1: Go to Issues Tab



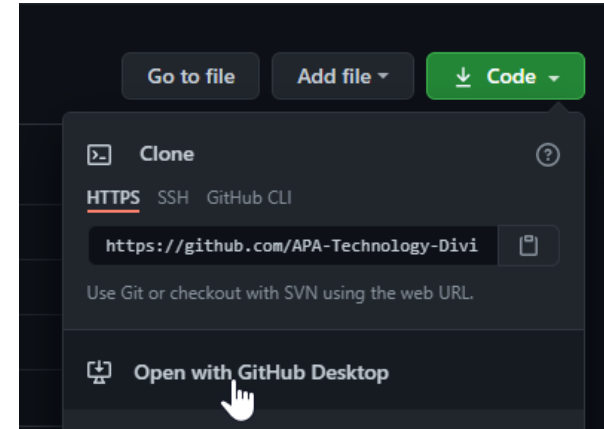
Step 2: Click New Issue

## Working with Git

# Clone A Repository

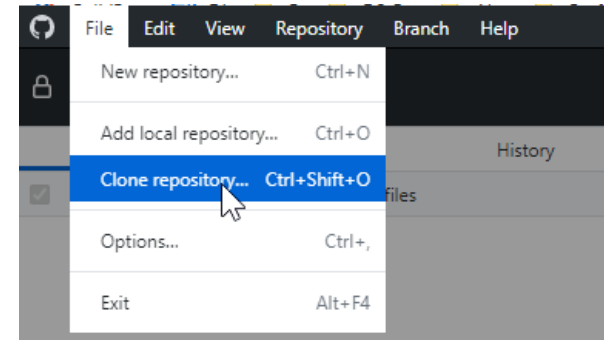
- Cloning a repository creates a local copy of files associated with a project on your drive.

Online



OR

GitHub Desktop



Documents > GitHub > planning-technology-resources >

Name	Date modified	Type	Size
resource_pages	3/8/2021 9:44 AM	File folder	
CONTRIBUTING.md	3/8/2021 9:44 AM	MD File	2 KB
LICENSE	3/8/2021 9:44 AM	File	8 KB
README.md	3/8/2021 9:44 AM	MD File	3 KB

## Working with Git

# What is Markdown?

**Markdown** – is a text based formatting language that can be used to format and layout webpages on GitHub and similar sites.

## Basic Syntax

These are the elements outlined in John Gruber's original design document. All Markdown applications support these elements.

Element	Markdown Syntax
Heading	# H1 ## H2 ### H3
Bold	<b>**bold text**</b>
Italic	<i>*italicized text*</i>
Blockquote	> blockquote
Ordered List	1. First item 2. Second item 3. Third item
Unordered List	- First item - Second item - Third item
Code	`code`
Horizontal Rule	---
Link	[title](https://www.example.com)
Image	![alt text](image.jpg)

<https://www.markdownguide.org/cheat-sheet/>

## Working with Git

# Pushing Changes to a Repository you “Own”

## JS/HTML/CSS

Front-end web related packages and resources

```
* **Resource Name**: Name of the resource
* Description: A description of what it provides to viewers in a sentence or two.
* License: The type of open source license applied to the resource if any. Non-opensource resources should be
* Provider: Who is the sponsor or provider of the resource.
* Links: Hyper-Link(s) to the resource.
```



## JS/HTML/CSS

Front-end web related packages and resources

```
* **Turf.js**
* Description: Advanced geospatial analysis for browsers and Node.js.
* License: MIT License
* Provider: Turfjs
* Links: [About] (https://turfjs.org/) / [GitHub] (https://github.com/Turfjs/turf)
```



## Working with Git

# Pushing Changes to a Repository you “Own”

Current repository: **planning-technology-resources**

Current branch: **master**

Fetch origin: Last fetched 4 minutes ago

Changes: 1 changed file

History

resource\_pages\PlanningCodingResources.md

```
@@ -49,11 +49,11 @@ R Packages & Related Resources
## JS/HTML/CSS
Front-end web related packages and resources

- **Resource Name**: Name of the resource
- * Description: A description of what it provides to viewers in a sentence or two.
- * License: The type of open source license applied to the resource if any. Non-opensource resources should be labeled "Proprietary" or "Other".
- * Provider: Who is the sponsor or provider of the resource.
- * Links: Hyper-Link(s) to the resource.

+ **Turf.js**
+ * Description: Advanced geospatial analysis for browsers and Node.js.
+ * License: MIT License
+ * Provider: Turfjs
+ * Links: [About](https://turfjs.org/) / [GitHub](https://github.com/Turfjs/turfjs)

## Other
```

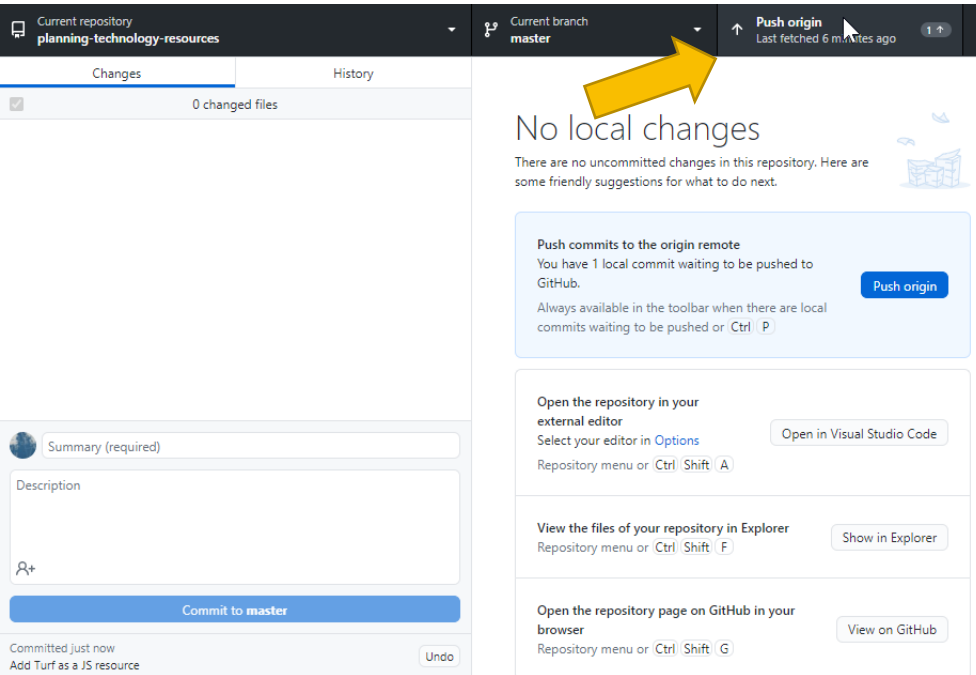
Add Turf as a JS resource

Add Turfjs as a resource for coding.

Commit to master

## Working with Git

# Pushing Changes to a Repository you "Own"



The screenshot shows the GitHub web interface for a repository named 'planning-technology-resources'. The 'Changes' tab is selected, showing '0 changed files'. A yellow arrow points to the 'Push origin' button in the top right corner of the repository view. Below the arrow, the text 'No local changes' is displayed, along with a message: 'There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.' The suggestions include: 'Push commits to the origin remote' (with a 'Push origin' button), 'Open the repository in your external editor' (with a button to 'Open in Visual Studio Code'), 'View the files of your repository in Explorer' (with a 'Show in Explorer' button), and 'Open the repository page on GitHub in your browser' (with a 'View on GitHub' button). At the bottom, there is a 'Commit to master' button and a message: 'Committed just now. Add Turf as a JS resource. Undo'.

## Updated on Page

### JS/HTML/CSS

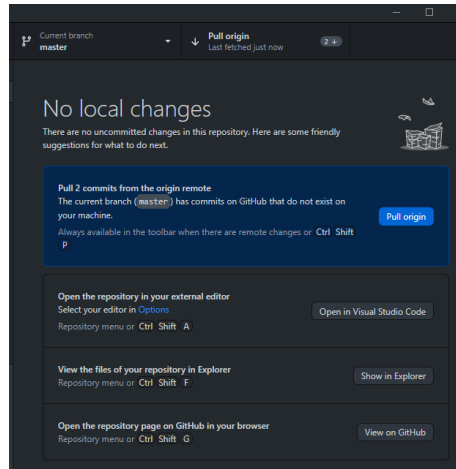
#### Front-end web related packages and resources

- **Turf.js**
  - Description: Advanced geospatial analysis for browsers and Node.js.
  - License: MIT License
  - Provider: Turfjs
  - Links: [About](#) / [GitHub](#)

## Working with Git

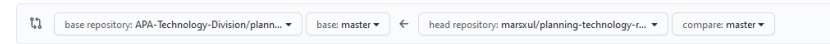
# Pull Requests to Other People's Repositories

fork – By forking a repository you can edit, and eventually fill a pull request to merge into the original repo if desired.



### Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).



There isn't anything to compare.

APA-Technology-Division:master and marsxul:master are identical.

Showing 0 changed files with 0 additions and 0 deletions.



No commit comments for this range



Working with Git

# Pull Requests to Other People's Repositories

Comparing changes  
Create Pull Request  
Add notes

```

16 resource_pages/PlanningDataSpecifications.md
@@ -23,7 +23,7 @@ A collection of urban planning related data specifications and standards for use
23 23 * Description: A data specification for representing street right of ways
24 24 * License: CC4/Apache 2.0
25 25 * Geographic Coverage: Global
26 - * Provider: OpenSource Collaborators
26 + * Provider: OpenSource Collaborators
27 27 * Links : [shared-row](https://github.com/open-data-standards/permitdata.org/wiki/Core-Permits-Dataset-Requirements)
28 28
29 29
@@ -41,6 +41,13 @@ A collection of urban planning related data specifications and standards for use
41 41 * Provider: Open Mobility Foundation
42 42 * Links : [OMP-MDS](https://github.com/OMP-MDS/OMP-MDS)
43 43
44 + **MTLFS**
45 + * Description: The Managed and T sharing of dynamic toll rates, and an resources are being priced dynamically
46 + * License: MIT
47 + * Geographic Coverage: Global
48 + * Provider: OpenSource Collaborators
49 + * Links : [MTLFS](https://github.com/MTLFS/MTLFS)
50 +
51 ## Build Environment
52
53 + **DTDL**
@@ -49,3 +56,10 @@ A collection of urban planning related data specifications and standards for use
49 56 * Geographic Coverage: Global
50 57 * Provider: Microsoft- Azure
51 58 * Links : [Azure-DTDL](https://github.com/Azure/azuredttdl/blob/master/README.md)
59 +
60 + **BLDS**
61 + * Description: The BLDS data standard is a collaborative effort by civic technology companies, governments and other interested parties to create a shared data specification for building and construction permit data.
62 + * License: Unknown
63 + * Geographic Coverage: United States
64 + * Provider: OpenSource Collaborators
65 + * Links : [BLDS](https://github.com/open-data-standards/permitdata.org/wiki/Core-Permits-Dataset-Requirements)

```

## Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).

base repository: APA-Technology-Division/plann...

base: master

head repository: marsxul/planning-technology-r...

compare: master

✓ Able to merge. These branches can be automatically merged.

Discuss and review the changes in this comparison with others. [Learn about pull requests](#)

Create pull request

1 commit

1 file changed

0 comments

1 contributor

Commits on Mar 19, 2021

Update of data standards and specifications

Showing 1 changed file with 15 additions and 1 deletion.

resource\_pages/PlanningDataSpecifications.md

@@ -23,7 +23,7 @@ A collection of urban planning related data specifications and standards for use

23 23 \* Description: A data specification for representing street right of ways

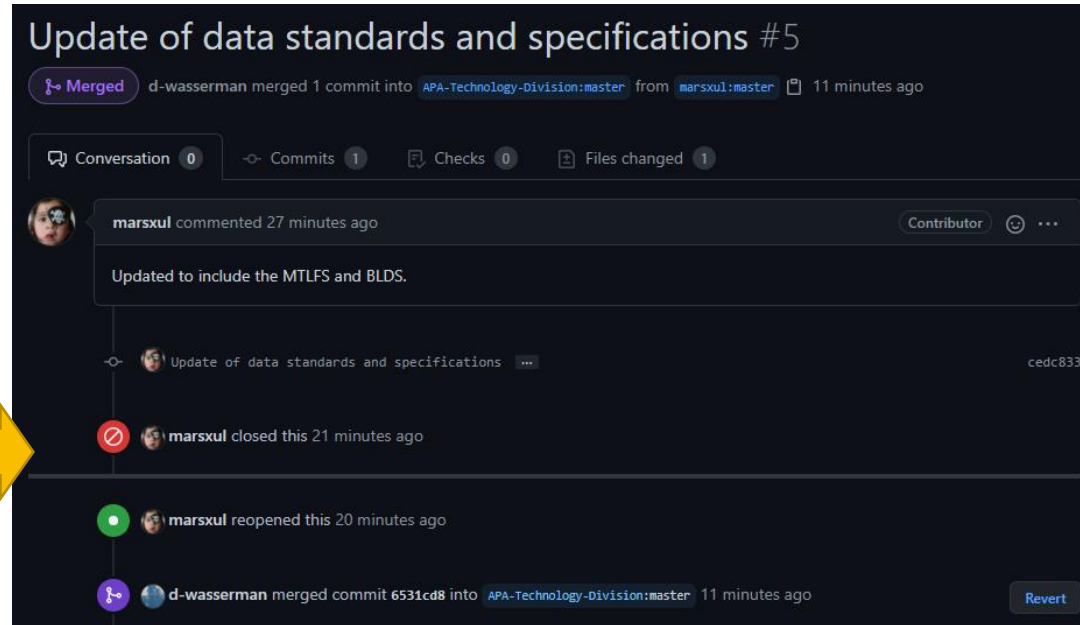
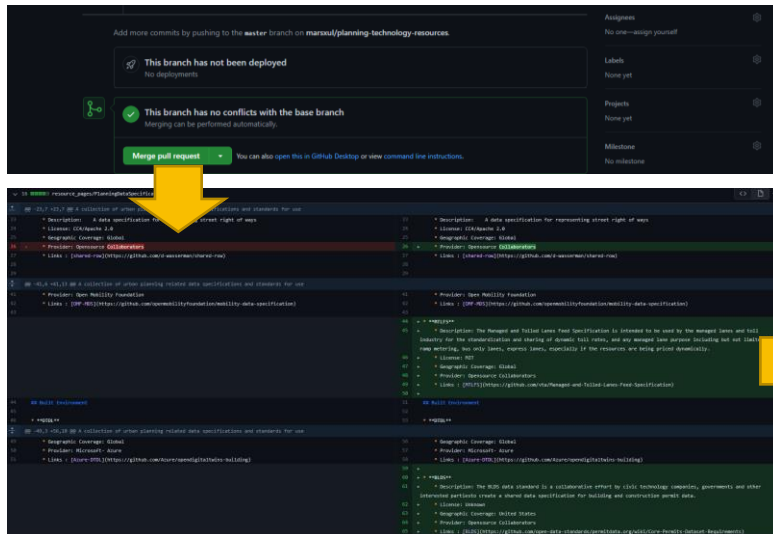
24 24 \* License: CC4/Apache 2.0

25 25 \* Geographic Coverage: Global

## Working with Git

# Merging Pull Requests from Others

- Review Request
- Merge it into master repo



## Examples

# A Different Way to Collaborate

## Open Sustainable Technology

A curated list of open technology projects to sustain a stable climate, energy supply, and vital natural resources.

*"True sustainability is open."* - [prototypes](#)

Our ambition is to list all high quality and actively maintained projects worldwide. Your contribution is necessary to keep this list alive, increase the quality and to expand it. Read more about it's origin and how you can participate in the [contribution guide](#), [community chat](#), [presentation slides](#) and related [blog post](#). Please [contact us](#) to give feedback, hints and ideas for [OpenSustain.tech](#) or [create an issue](#).

 Community Chat



<https://github.com/prototypes/open-sustainable-technology>

## Demonstration

# Planning Resources

- Safe practice area for anyone to contribute
- Help us build a useful resource, collectively constructed

APA-Technology-Division / urban-and-regional-planning-resources Public

Pin Unwatch 16 Fork 27 Starred 86

<> Code Issues Pull requests Discussions Actions Projects 1 Wiki Security Insights Settings

main 2 branches 0 tags

Go to file Add file Code

d-wasserman Fix IFC 89112ee 13 days ago 349 commits

.github/workflows	Add Branch to Actions	11 months ago
resources	updated flowchart	8 months ago
.DS_Store	Added link to Accessibility Observatory data sets	2 months ago
CONTRIBUTING.md	Update CONTRIBUTING.md	7 months ago
LICENSE	Update LICENSE	13 months ago
README.md	Fix IFC	13 days ago
code-of-conduct.md	Create code-of-conduct.md	11 months ago

README.md

About

Community list of data & technology resources concerning the built environment and communities.

data awesome sustainability technology resources urban-planning planning awesome-list hacktoberfest communities planners built-environment regional-planning

Readme CC0-1.0 License Code of conduct 86 stars

# Q&A

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LinkedIn: <https://www.linkedin.com/in/marshall-wilson-ballard/>

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<https://tech.planning.org/>

[apatechdivision@gmail.com](mailto:apatechdivision@gmail.com)



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*Making Great Communities Happen*