GitHub for Geographers

@jgravois

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How is this going to work?

1. Code
2. A brief introduction
3. In situ demo
what is GitHub?
(hint: it ends with .com)
- file hosting
- change archiving
- communication tool
what is Git?

distributed version control

similar to replicated SDE versioning
lets get collaborating!
pat finds a cool open source project

https://github.com/jgravois/sandbox

- GitHub: Fork A Repo
pat creates his own fork of the project

another repo hosted on github.com

git is distributed, each repo is a node in the graph
pat clones the repository

copys it onto his computer

git clone https://github.com/patrickarlt/sandbox.git

this creates another repo on pat's computer, another node in the graph
pat creates a branch
to store his own work

```
git checkout -b updates
```

- Branches in a Nutshell
- Basic Branching and Merging
- Atlassian: Using Branches
- Understanding the GitHub Flow
pat commits in the new branch to save his edits

git commit -am "update friends.geojson"
pat pushes the branch up to his fork

`git push origin updates`
then pat creates a pull request to propose that john incorporate his work too

- Creating a pull request
- Understanding the GitHub Flow
john merges the pull request!
john makes his own commit directly in GitHub
pat creates another branch

to store more edits

```
git checkout -b more-updates
```
and opens another pull request
merge conflict!

john edited the *same line* of the same file

- Resolve merge conflict w/ command line
- Resolve merge conflict on GitHub
so pat pulls from upstream
and resolves the conflict manually

git pull upstream master
john has a suggestion for pat
so john uses github.com to make an edit of his own
and opens a pull request for pat to review
lets whiteboard it
teamwork makes the *dream* work!
resources

- Try Git! (Browser based)
- GitHub Flow
- Atlassian: Learning Git
- GitHub Guides
- Git Documentation
please, *please*, please fill out a session survey

1. download the Esri Events App
2. select Dev Summit
3. search for "Git/GitHub for Geographers"
4. leave feedback!
idea, question, issue, or success story?

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