DS4200: Information Presentation and Visualization

Introduction to GitHub

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What is GitHub?

- A platform for version control and collaboration.
- Built on Git, a distributed version control system.
- Enables teams to work together on projects from anywhere.

Why Use GitHub?

- Track changes to code and projects.
- Collaborate with others seamlessly.
- Showcase your projects and contribute to open-source.

For this course:

- We have a small homework on GitHub
- You need to make your group project on GitHub

Key Features of GitHub

- **Repositories**: Centralized locations for your project files.
- **Commits**: Snapshots of changes made to your files.
- **Branches**: Parallel versions of your project for experimentation.
- **Pull Requests**: Propose and discuss changes to the main project.
- **Issues**: Track bugs, features, and other tasks.

Getting Started with GitHub

1. Create a GitHub account at `github.com`.
2. Install Git on your local machine.
3. Initialize a repository and push your code to GitHub.
4. Explore repositories and start contributing.

Demo Time

Let's walk through a demo of GitHub's basic features!

Cheat sheet: https://education.github.com/git-cheat-sheet-education.pdf

In-class activity

- Initialize a repo on GitHub and called it GitHub_Exercise. Make sure it is public.
- Add a random file to the repo, commit and push to the remote
- Add a folder called "Folder" and add some random files to it, commit and push to the remote
- Add a file called "Hello.txt", commit and push to the remote
- Go back to the commit before we add the "Hello.txt", add a new branch called "new" and then add another file called "Goodbye.txt" to the "new" branch, commit and push to the remote
- Submit the link for your GitHub repo.

Need to master

- Initialize a repository
- Pull others' work from repository
- Work in your local repository
- Add all changes and commit
- Go back to a certain commit
- Push your code and folder to GitHub
- Merge the work if necessary

Summary

- GitHub is a powerful platform for version control and collaboration.
- Key features include repositories, branches, commits, pull requests, and issues.
- Getting started is easy: Create an account, install Git, and push your first repository.

Collaboration