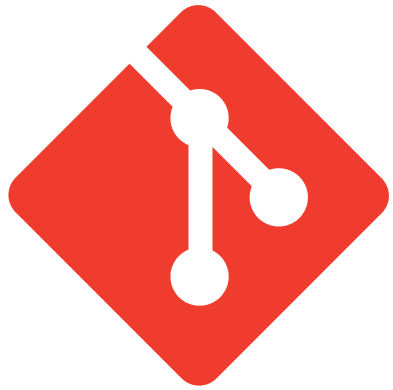
PURDUE
UNIVERSITY

Day 1

Workshop: Git and GitHub



git

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Overview

Disclaimer

Motivation

What is Version Control?

Why is Version Control Important?

Version Control Options Available

Client-Server vs. Distributed

Advantages and Disadvantages of GitHub

Excellent for Collaboration in the Open Source Community Not Great for Binary Files (Subversion is Better)

Good Code Practices

The Importance of Reproducible Research

Collaboration in Academia

Useful Skills to Aid Work Flow

Markdown Bash

Set Up Git (GUI and Terminal)

Create a New Git Directory (git init)

Local vs. Remote References

Clone a Repository (git clone)

The Git Cycle

Synchronize Version (git pull) Make Changes to Code Stage Changes for Commit (git add) Commit Changes (git commit) Push to Origin (git push)

Review Changes

View Log (git log) View Staged Changes (git status)

Recovering Past Versions

Organizing Past Versions (MD5 Hash) Recovering a Previous Version (git checkout)

What is Branching?

Create a New Branch (git checkout -b)

Merge Two Branches (git merge)

Synchronize Two Branches (git rebase)

List All Branches (git branch)

Delete a File (rm vs. git rm)

Delete a File (rm vs. git rm)

Undoing Changes (git revert vs. git reset)

Public vs. Private Repositories

Bitbucket and GitHub

Set Up Git Remote

Review the Git Cycle

Pull Requests

Forking a Repository

Thank you for your attention.