

Introduction to Git

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May 3, 2016

Step 0: Installation

- **Install Git:** <https://git-scm.com/downloads>
- **Easy Install for Linux**
 - `apt-get install git` (Ubuntu/Debian)
 - `yum install git` (Fedora)
 - Others can be found at
<https://git-scm.com/download/linux>
- This is all we need to get started. You can work with Git completely off-line.
- Make an account at
<https://github.com/> or <https://bitbucket.org/>
We will discuss differences between the two.

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While everything is downloading/installing...

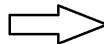
What is Git?

- Git is a version control system
- As the name suggests, a system to manage different versions of a project
- A project in Git is called a repository/repo
- Git allows us to take it a step further with many other features
- Collaborating on a project is much simpler with Github/Bitbucket

My First project

تاریخ ترمیم	لایب	مقاله
2014/11/03 1:14 PM	فائل فولڈر	Q2 R package
2014/05/23 12:30 ...	فائل فولڈر	bias correction scripts
2014/05/19 11:24 ...	فائل فولڈر	Fixing code-noah
2014/05/28 3:41 PM	فائل فولڈر	HIVscript
2013/12/03 5:41 AM	فائل فولڈر	Interactions
2014/06/09 2:43 PM	فائل فولڈر	manuscript
2014/06/30 4:53 PM	فائل فولڈر	manuscriptAcad
2014/07/24 9:45 AM	فائل فولڈر	manuscript-dw
2014/09/03 9:48 AM	فائل فولڈر	manuscript-nr
2014/06/18 2:52 PM	فائل فولڈر	tmp
2014/06/18 2:52 PM	فائل فولڈر	tmp2
2014/02/19 7:14 PM	مستند HISTORY	Rapp-history
2014/04/21 4:53 PM	مستند RHISTORY	Rhistory
2014/03/03 7:55 PM	Adobe Acrobat D...	2014_03_03_18_31_06.pdf
2014/04/17 8:15 PM	Adobe Acrobat D...	2014_04_17_20_10_15.pdf
2013/09/13 4:15 PM	Adobe Acrobat D...	Acad-Interactions.pdf
2013/09/26 12:18 ...	Adobe Acrobat D...	Acad-Interactions2.pdf
2013/09/14 9:33 AM	Adobe Acrobat D...	Acad-references.pdf
2014/04/21 2:37 PM	R مستند	DN-script.R
2014/05/19 12:38 ...	Adobe Acrobat D...	draft.pdf
2014/02/10 6:43 PM	مستند AUX	Gintemet.aux
2014/02/10 6:43 PM	فائل دستاویز	Gintemet.log
2014/02/10 6:43 PM	Adobe Acrobat D...	Gintemet.pdf
2014/02/10 6:43 PM	مستند G2	Gintemet.synctex.go
2014/02/19 6:43 PM	LaTeX Document	Gintemet.tex
2014/02/19 7:12 PM	R مستند	Gintemetissue.R
2014/05/08 11:08 ...	R مستند	GLMquestion.R
2014/02/20 1:16 PM	Adobe Acrobat D...	glmreport.pdf
2014/05/09 3:54 PM	Adobe Acrobat D...	initial-spambase.pdf
2014/03/07 12:14 ...	Adobe Acrobat D...	PRESENTATION.pdf
2014/02/10 11:22 ...	Microsoft PowerP...	ROIfigs.pptx
2013/09/22 11:51 ...	Adobe Acrobat D...	ResearchStrategy.pdf
2013/10/27 7:00 PM	مستند CSH	run_sheli.ch
2013/12/04 5:27 PM	Shell Script	run_simulate.sh

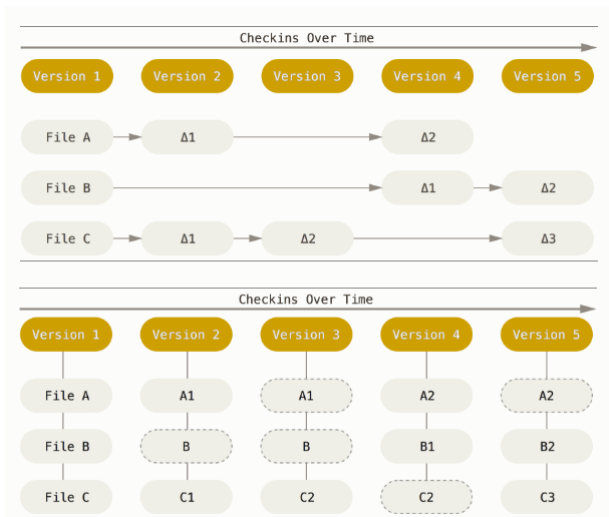
نام	فوری رسائل
Dropbox	%
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HierBasis	%
Manuscript	%
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OneDrive	%
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My Current Project

تاریخ ترمیم	لایب	مقاله
2016/05/03 11:24 ...	فائل فولڈر	gR
2015/12/27 8:31 AM	فائل فولڈر	Figures and Tables
2016/04/28 2:23 PM	فائل فولڈر	LatexFiles
2016/04/28 2:23 PM	فائل فولڈر	Rfiles
2016/02/10 2:42 AM	فائل فولڈر	R-Package
2016/01/06 9:32 AM	فائل فولڈر	Submission to JSM
2016/05/03 11:23 ...	فائل دستاویز	gIgnore
2015/12/17 1:20 PM	فائل دستاویز	abstract.txt
2016/03/23 12:23 ...	Adobe Acrobat D...	Huang2010additiveModels.pdf
2015/12/17 1:20 PM	مستند MD	README.md

How does git work?



So why Git?

Advantages

- Allows you manage different versions of your project
- We can go back in time to previous versions
- Isn't restricted to specific type of projects (not just for computer scientists)
- Makes collaboration on a project really easy
- We have nice tools like GitHub and Bitbucket for collaboration and online sharing

Disadvantages

- Initial learning curve, which we will overcome today

As promised Github vs. Bitbucket

Essentially, Github/Bitbucket is a remote location to store/share your repositories

	Github	Bitbucket
Cost	Free	Free
Public Repositories	Unlimited	Unlimited
Private Repositories	5 ¹	Unlimited
Collaborators	Unlimited	5 ²

Table: 1. After student discount. 2. For the free account, can have upto unlimited collaborators with paid account.