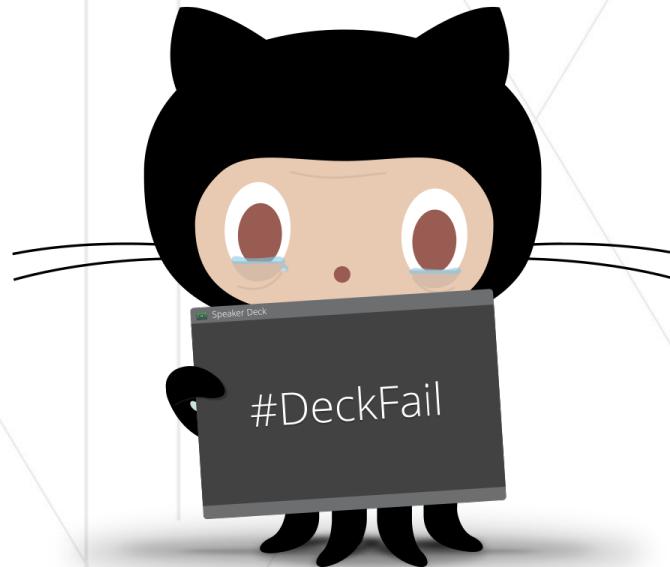
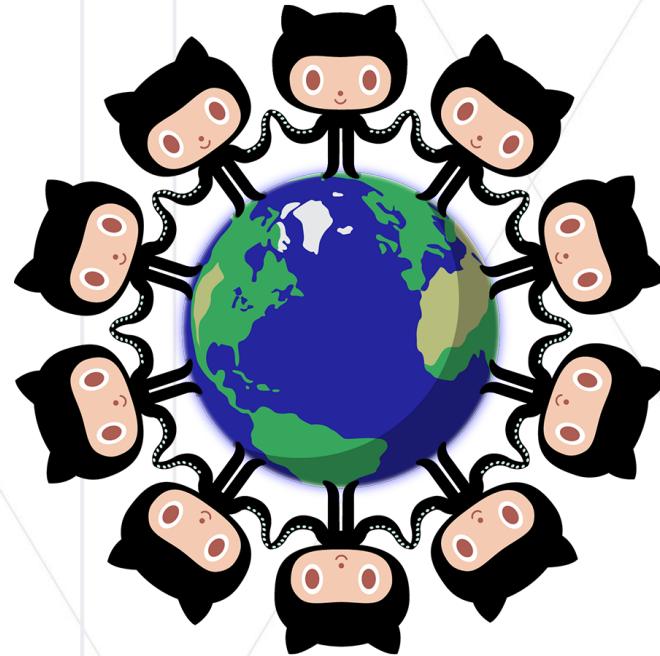


# ALONE



Alone we can do so little;

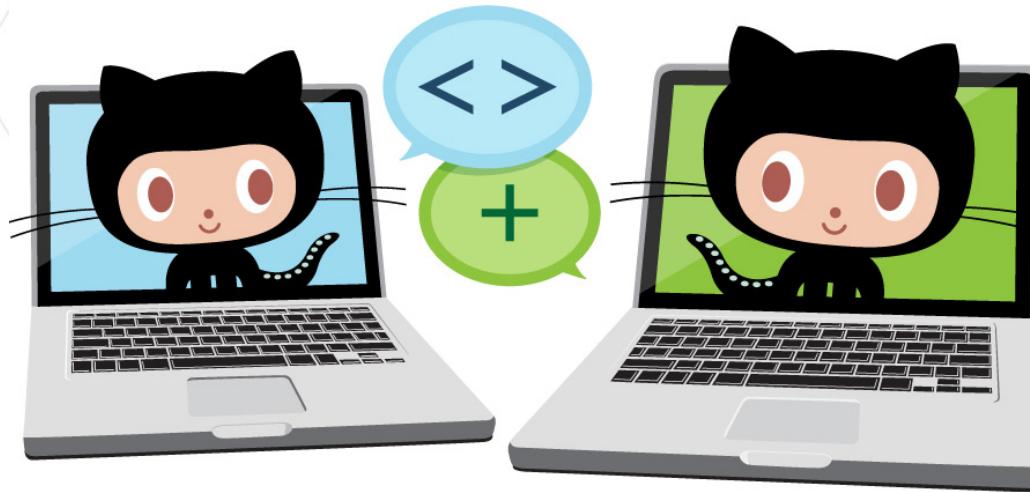
# TOGETHER



together we can do so much.

*– Helen Keller*

# GITHUB IS COLLABORATION & COMMUNITY



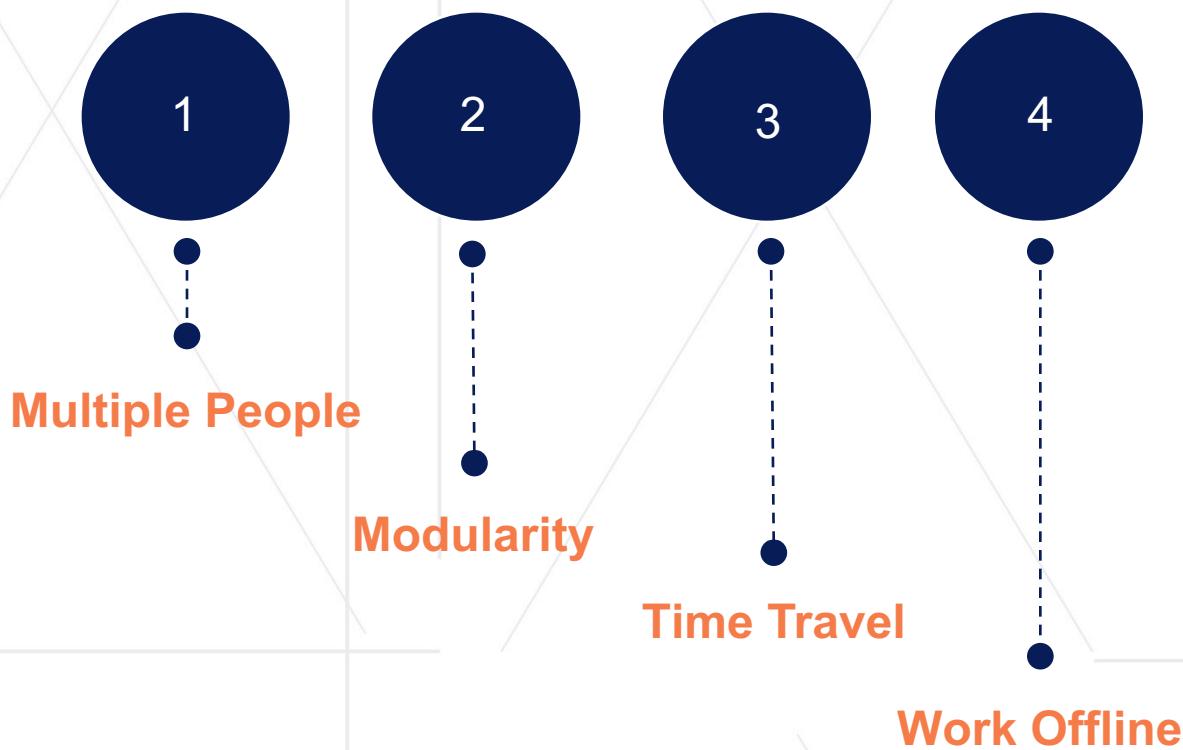
SHARE

CONTRIBUTE

HELP

GET HELP

*BEFORE GITHUB* **WHY GIT?**



# MULTIPLE PEOPLE



# MULTIPLE PEOPLE

- Multiple people can work on the same file at the same time without hosing each others work
- Leads to greater productivity ( more people ), and quality ( more eyes )

# MODULARITY/BRANCHES



# MODULARITY/BRANCHES

FEATURES

EXPERIMENTS

BUGS

# FEATURES

*MODULARITY*

FEATURE C

FEATURE D

*FEATURE B*

*FEATURE A*

# FEATURES

*MODULARITY*

- Break problems into manageable features
- Easily switch between features
- Feature A is no longer desired; Delete it
- Feature B is impossible; Delete it
- You totally screwed up feature C; Delete it

# Experiments

*MODULARITY*



# Experiments

*MODULARITY*

- Test any idea without fear of jacking up your project
- Try multiple approaches to the same problem and keep the best

# BUGS

*MODULARITY*



# BUGS

*MODULARITY*

- You can squash a bug with multiple features or experiments in development

# MODULARITY

*IN REVIEW*

- Eliminates the need for `index.html`, `index2.html`, `index3.html`
- Makes it less likely unfinished work will accidentally mix-in with production code
- Leads to greater productivity and quality

# TIME TRAVEL



# TIME TRAVEL

- Go back to any point in the history of development and review or restore code
- Remember what and why you did something in the past or in the present

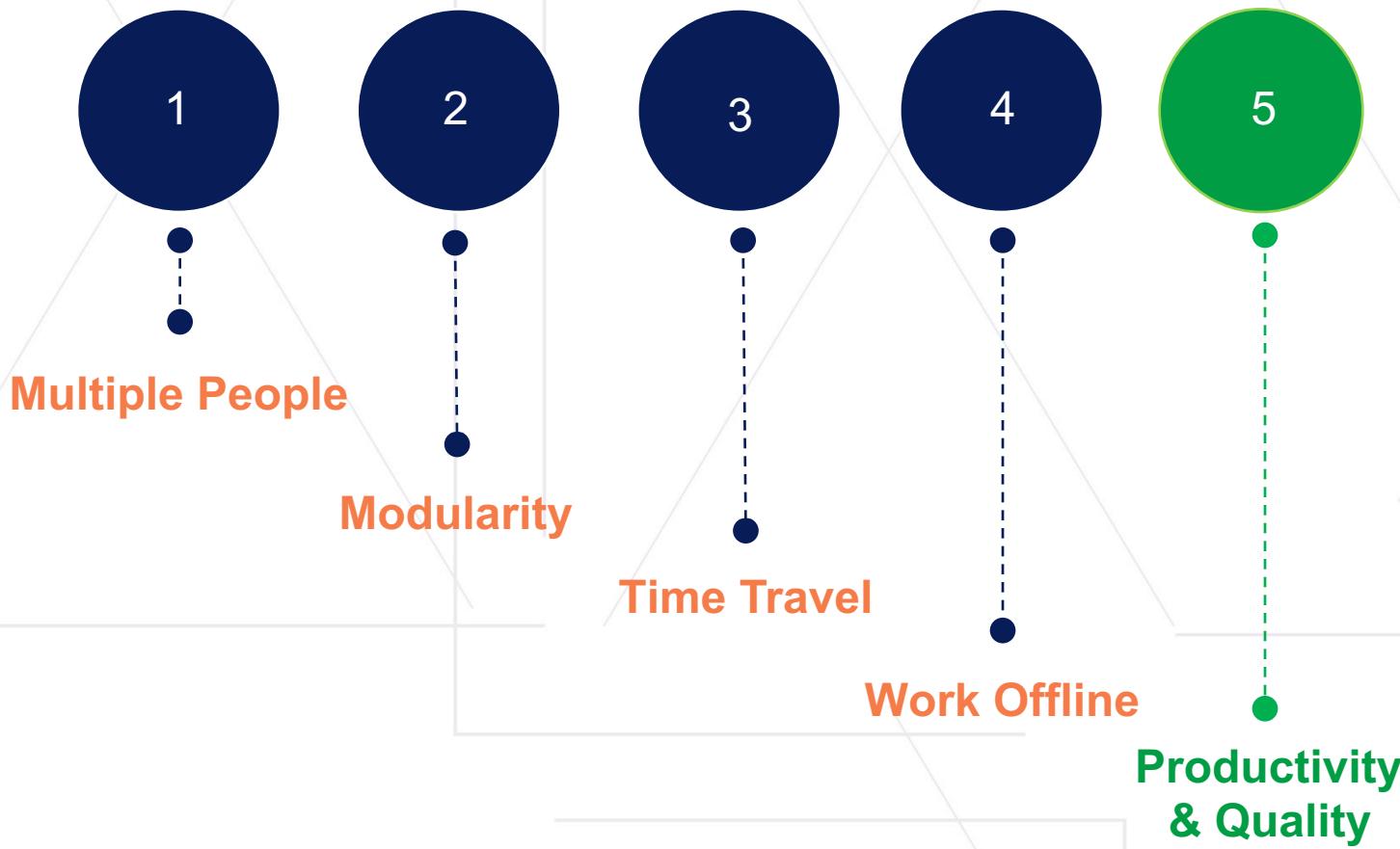
# WORK OFFLINE



# WORK OFFLINE

- On a plane, at the doctor's office, or waiting in the car
- Since Git is distributed you always have a backup of the entire history of your project

# WHY GIT? *IN REVIEW*



# WHY GITHUB?

01

**Security**

04

**Access** (*collaboration*)

02

**Hosting** (*adoption*)

05

**Communication**  
(*collaboration*)

03

**Web Interface** (*adoption &*  
*collaboration*)

06

**Collaboration**

# SECURITY

*FEATURE*



# SHIB, AD, 2FA *SECURITY*



Shibboleth.®

# **SHIB, AD, 2FA** *SECURITY*

- Authorization for Github Enterprise is SAML/Shibboleth or Active Directory
- Login for Github off prem can use 2FA
- If you are currently using Github particularly with Facebook or Gmail credentials then you may want to turn on 2FA

# UF SERVERS

*SECURITY*



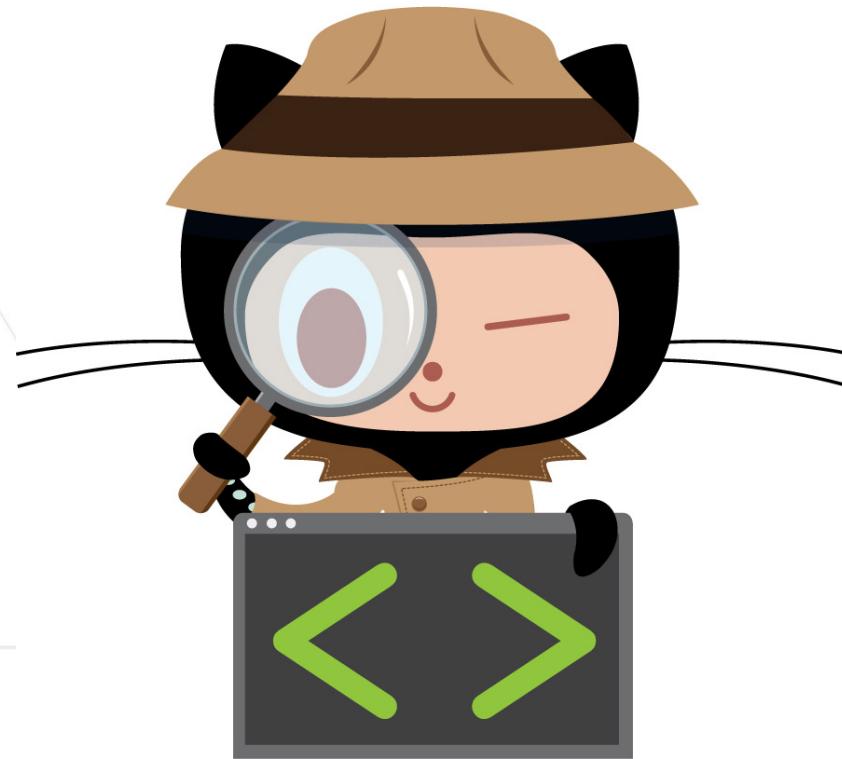
# **UF SERVERS**

***SECURITY***

- Data is stored on UF machines
- Can use private IP's

# AUDITABLE

*SECURITY*



# AUDITABLE *SECURITY*

- If all code is in one place then it is auditable by people and by scripts

# **PRIVATE DATA** *SECURITY*

**GitHub**

**123456**



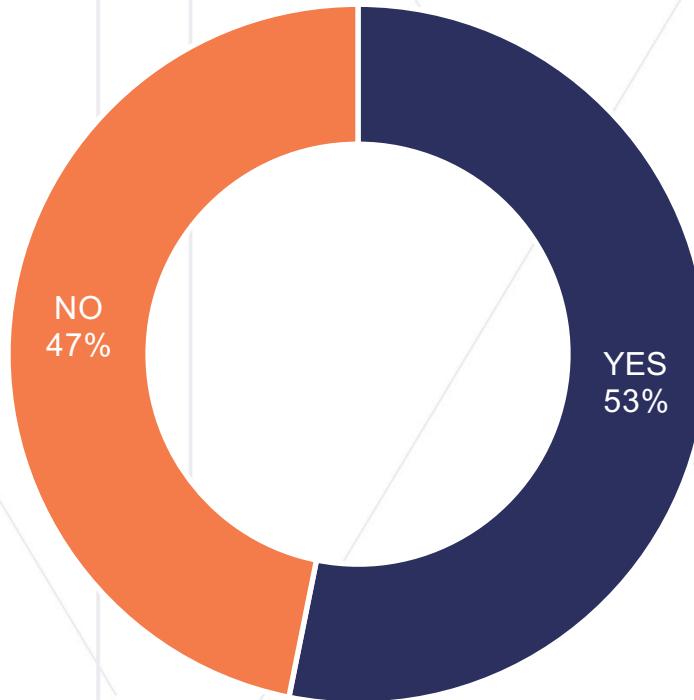
**Bitbucket**

**PASSWORD**

# **PRIVATE DATA** *SECURITY*

- Ensure passwords and other sensitive data are not hosted all over the place
- Within an organization or Github Enterprise you can make most of your projects public since only other UFIT citizens can see the code

# AFRAID *SECURITY*

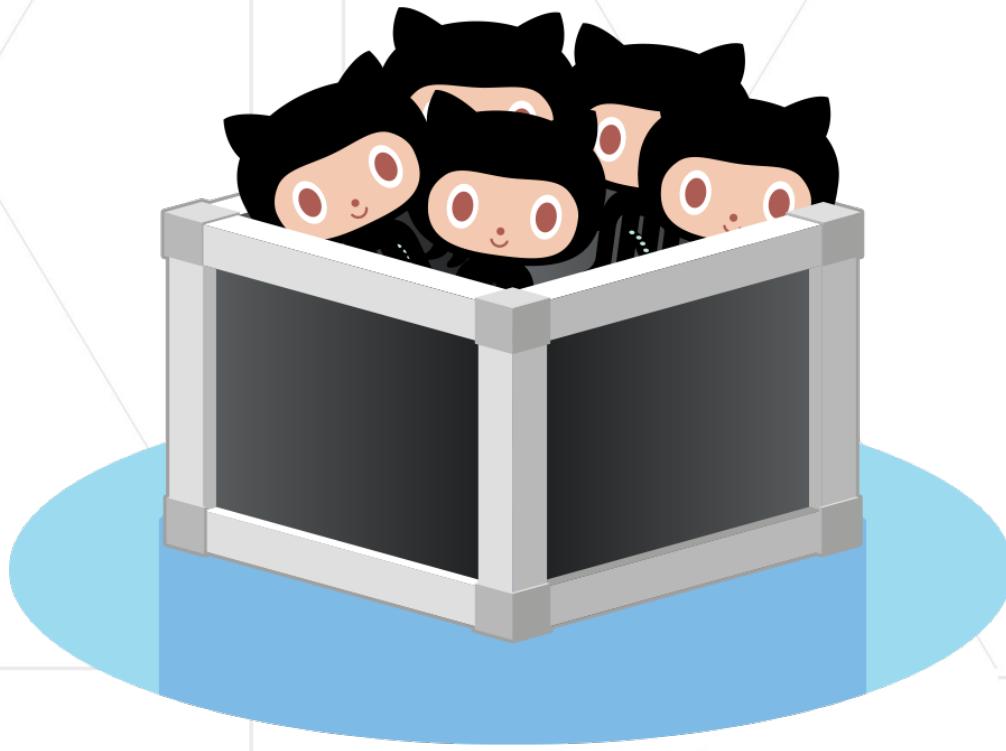


**No means not comfortable hosting  
code on Github.**

# AFRAID *SECURITY*

- Many people need the features of Github but are uncomfortable hosting code on non UF servers
- This kills collaboration opportunities

# GIT HOSTING *FEATURE*

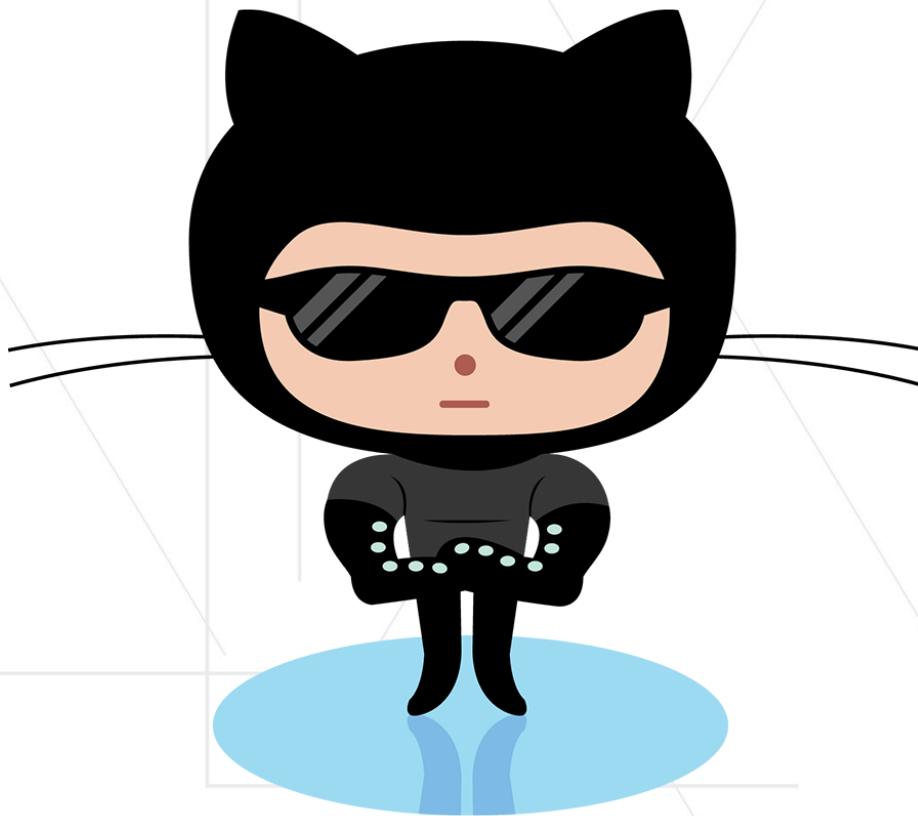


# GIT HOSTING *FEATURE*

- Lowers barriers to entry skill wise
- Makes adoption more likely
- If its too difficult people won't use version control

# ACCESS

*FEATURE*



# ACCESS *FEATURE*

- **Lowers barriers to collaboration**
- **If its too difficult people won't collaborate**

# WEB INTERFACE

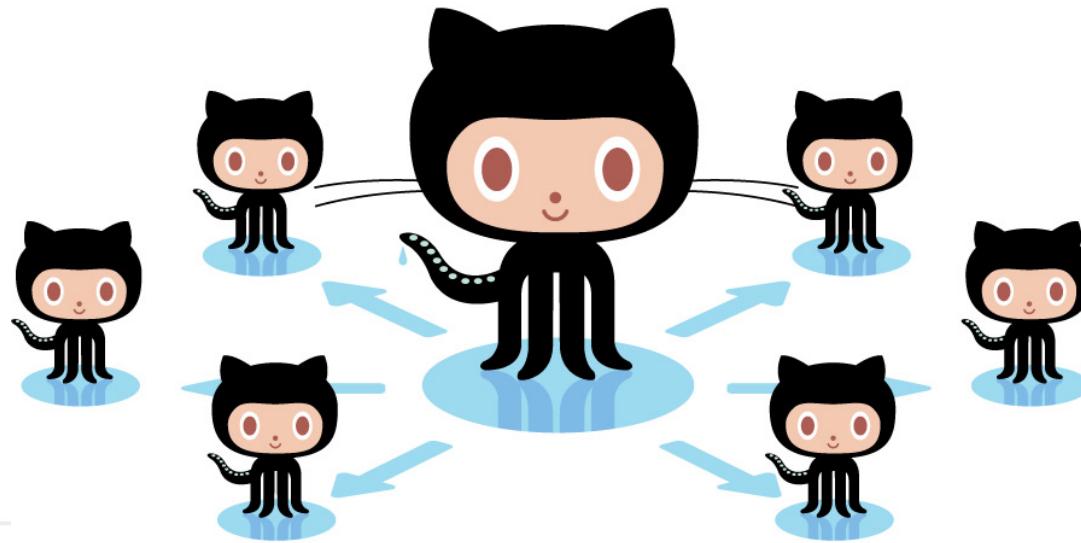
*FEATURE*



# WEB INTERFACE *FEATURE*

- View your code from any device/location
- Every line is a reference for a future need
- Total transparency
- See the history of everything
- Crazy good collaboration tools
- Crazy good communication tools

# COMMUNICATION *FEATURE*



# COMMUNICATION *FEATURE*

ISSUES & LABELS

CODE REVIEW

MILESTONES

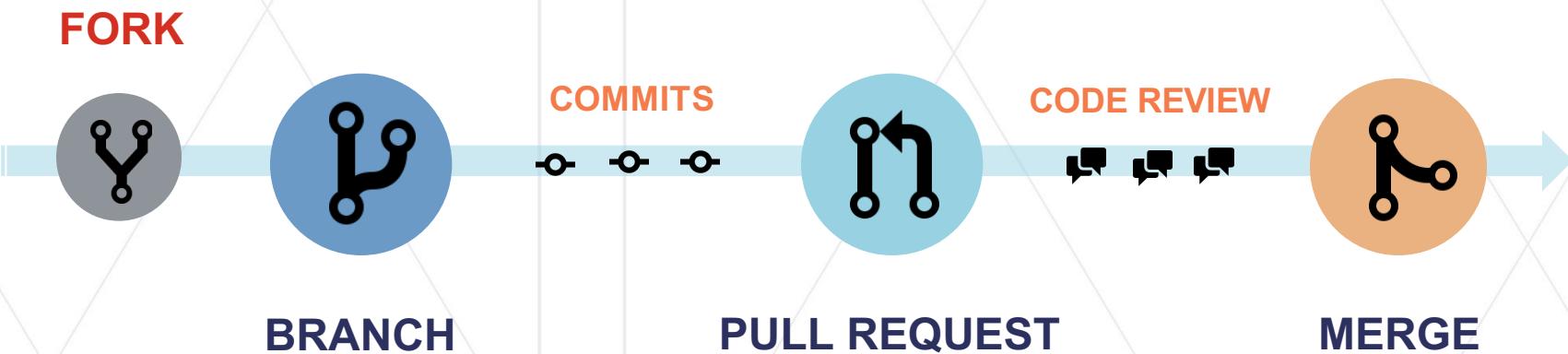
COMMENT & DISCUSS

MARKDOWN

WIKI

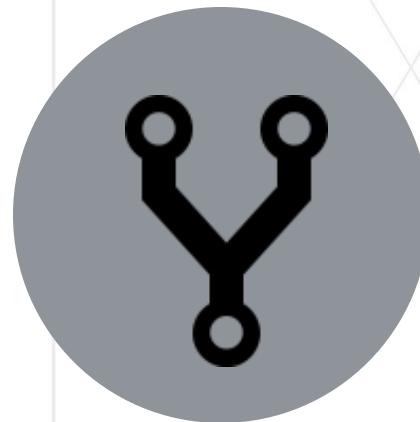
All project communication in one place!

# COLLABORATION *FEATURES*



GitHub Flow / Feature Branch Workflow

# FORK *FEATURE*

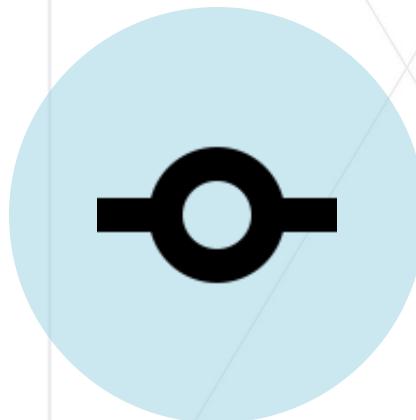


# **FORK** *FEATURE*

- You take a project you don't have write access to and make a copy of it under your own account so you can modify it
- Fork a project to work on features or bugs
- Fork a project to get a head start on your own project

# COMMIT

*GIT FEATURE*



# COMMIT

*GIT FEATURE*

- A batch of code changes to one or more files with a message describing the changes made

# BRANCH

*GIT FEATURE*



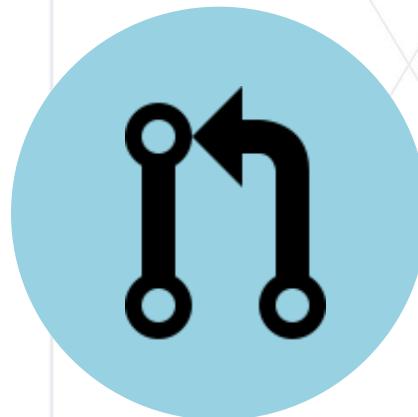
# BRANCH

*GIT FEATURE*

- A parallel copy/snapshot of your project
- This is where you develop a feature
- This is where you squash a bug
- This is where you experiment

# PULL REQUEST

*FEATURE*



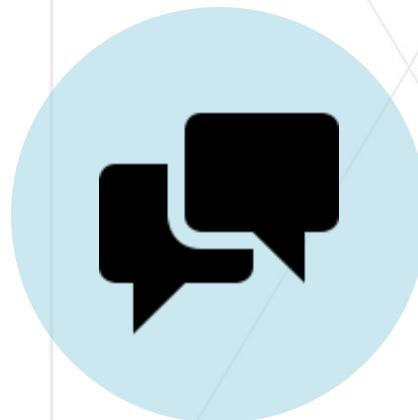
# PULL REQUEST

*FEATURE*

- A notification to the original owner that you have completed a feature or bug fix

# CODE REVIEW

*FEATURE*



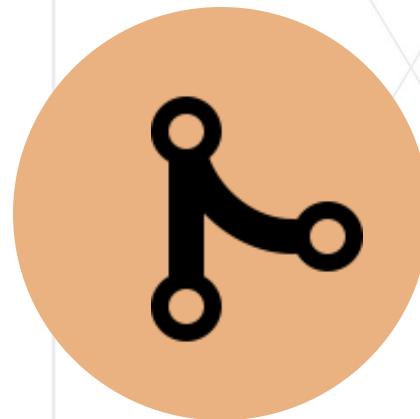
# CODE REVIEW

*FEATURE*

- The original owner of the project can perform a code review on your feature or bug fix, add comments, make commits, or requests additional changes

# MERGE

*GIT FEATURE*

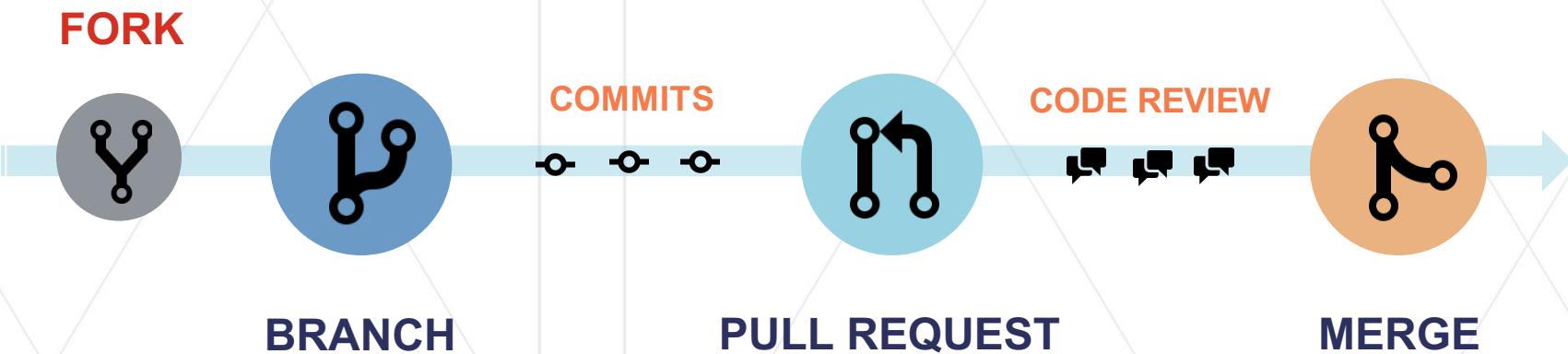


# MERGE

*GIT FEATURE*

- After the pull request and code review the original owner can merge your feature or bug fix into the original project
- Yay for progress ( hello new feature or goodbye bug )

# COLLABORATION *FEATURES*



GitHub Flow / Feature Branch Workflow

# UF GITHUB

MOST UF PROJECTS OPEN SOURCED

CODE ACCESSIBLE TO ALL UFIT WORKERS

CODE CLOSED TO ALL NON UFIT WORKERS

UNLIMITED COLLABORATION OPPORTUNITIES

# WHY GITHUB? *IN REVIEW*



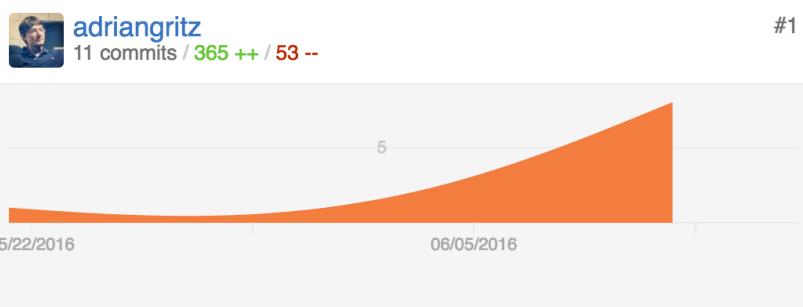
# GIT SMARTER



<http://adriangritz.github.io/git-real-presentation/>

# THANK YOU

## GIT SMARTER CONTRIBUTORS



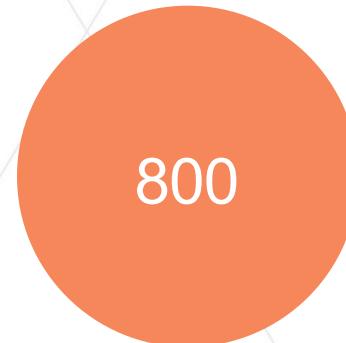
# DATA



# WORLD POPULARITY



Github

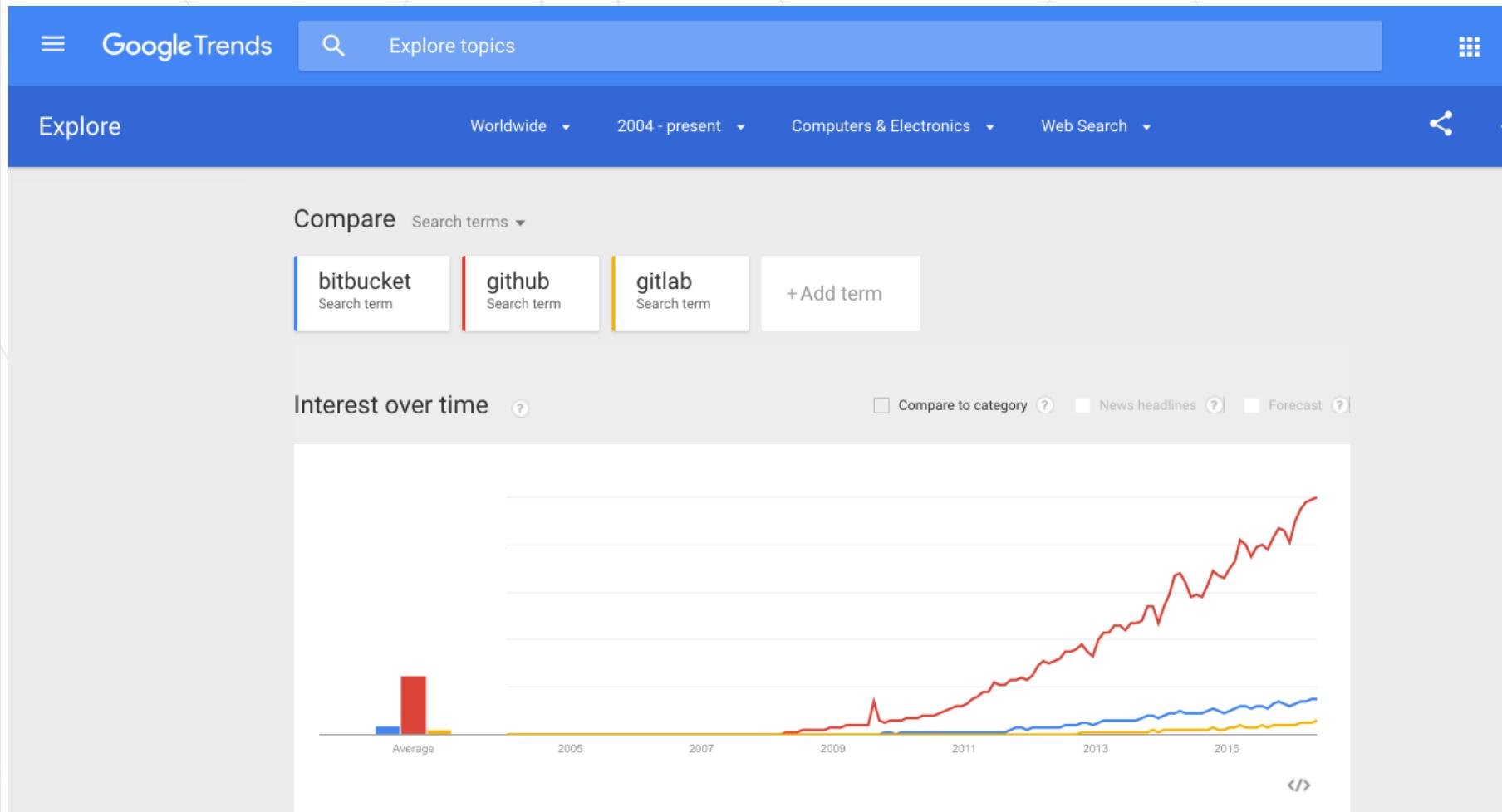


Bitbucket

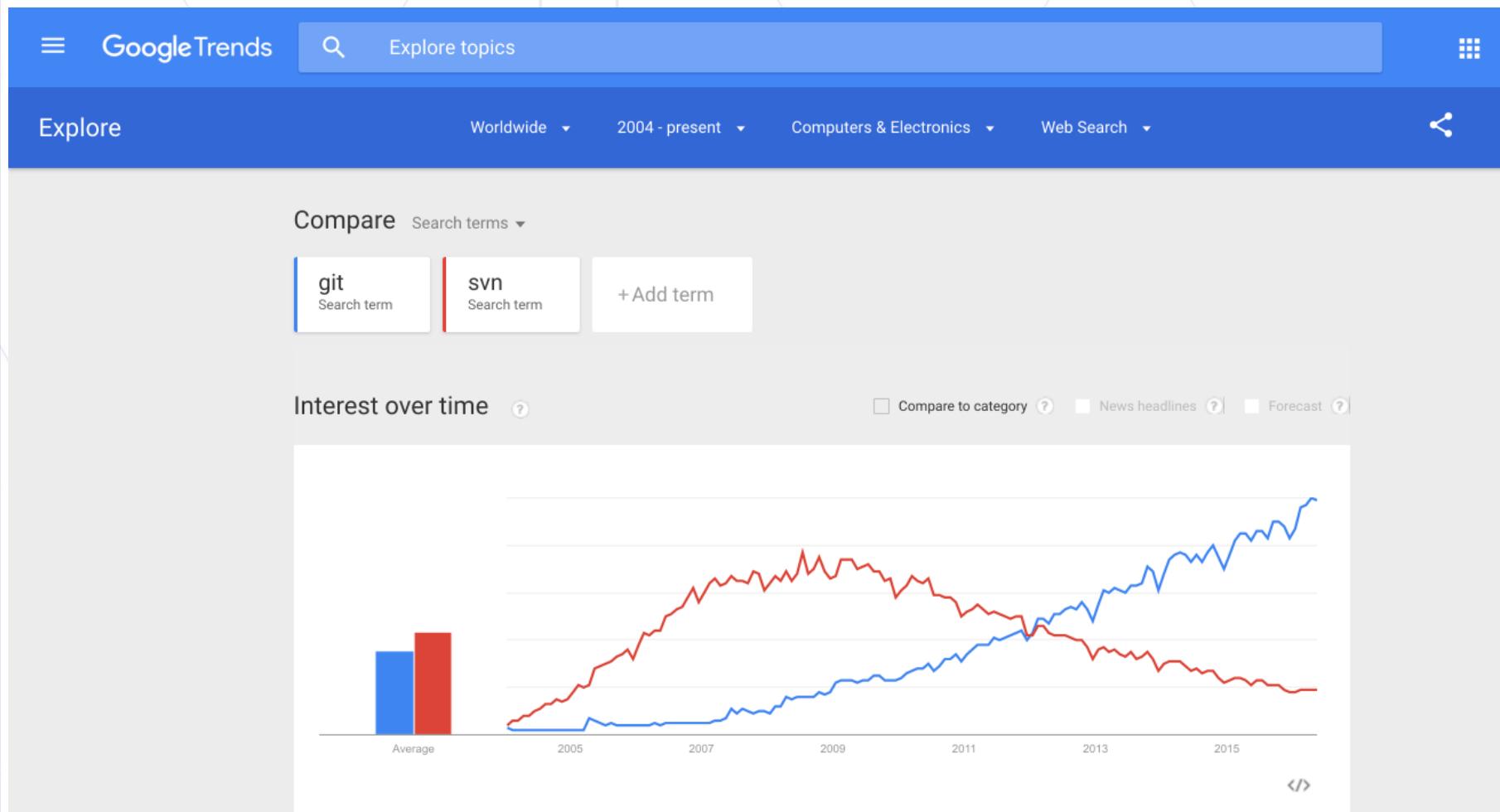


Gitlab

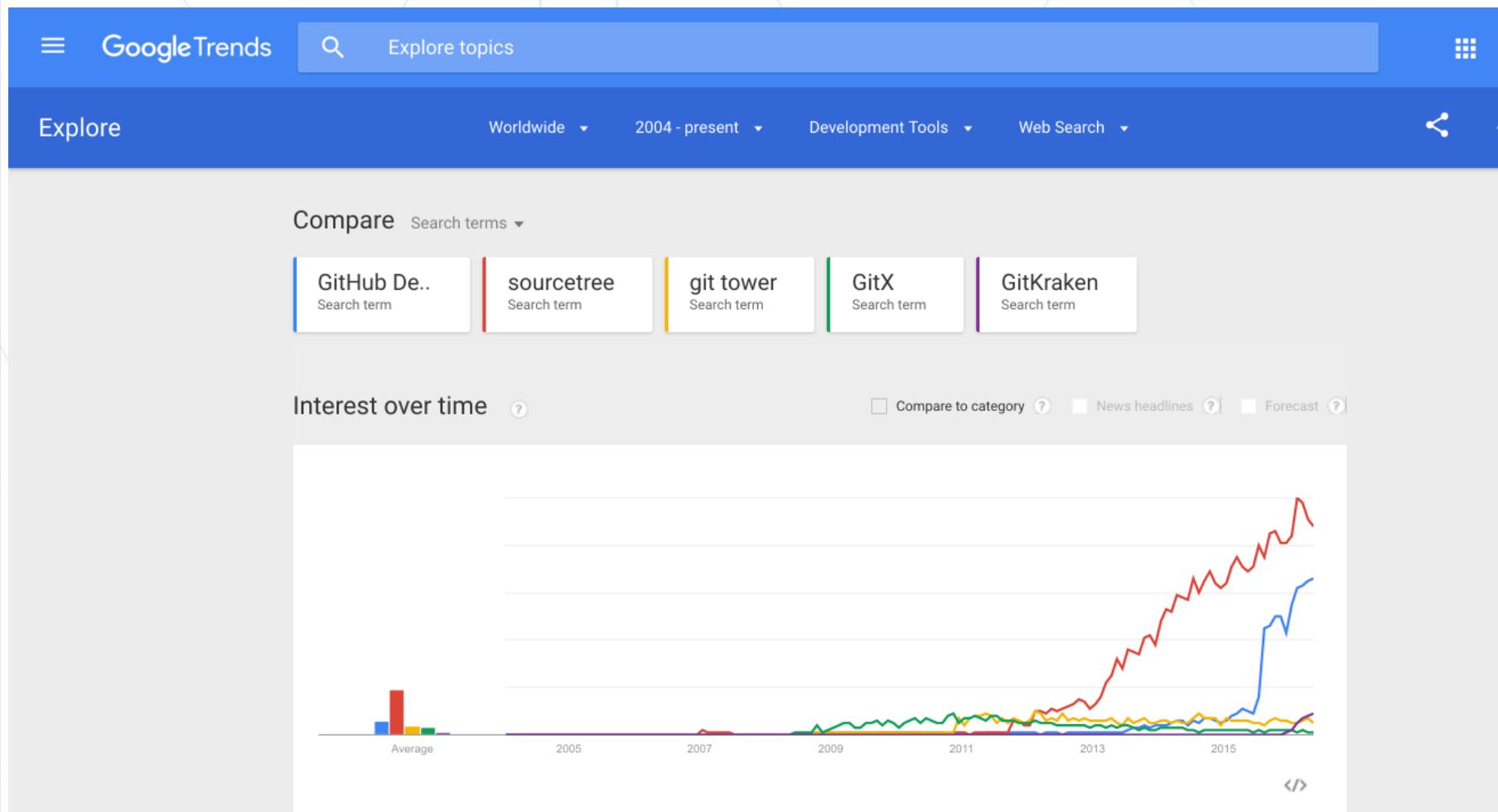
# GIT HOSTING



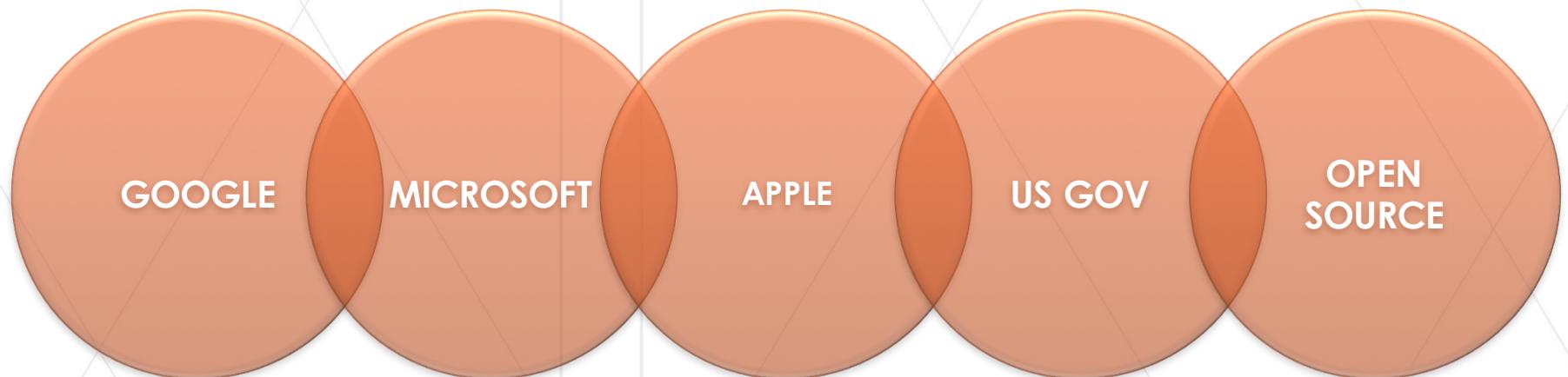
# GIT vs SVN



# GIT GUI



# COMPANIES USING GITHUB



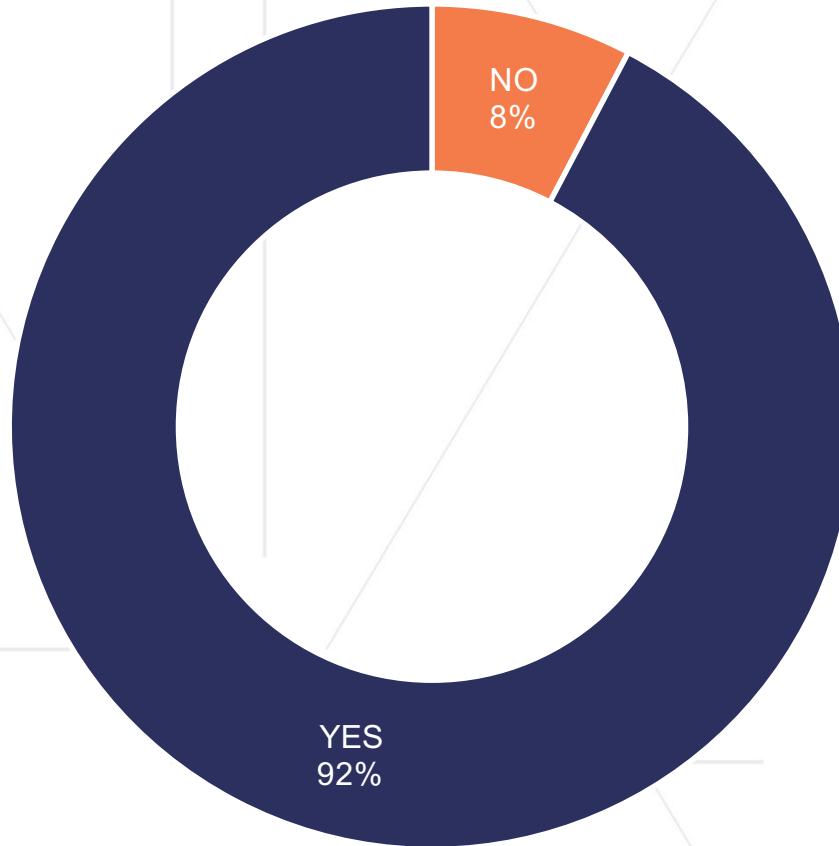
# GITHUB FOR ENTERPRISE SURVEY RESULTS

GITHUB FOR ENTERPRISE

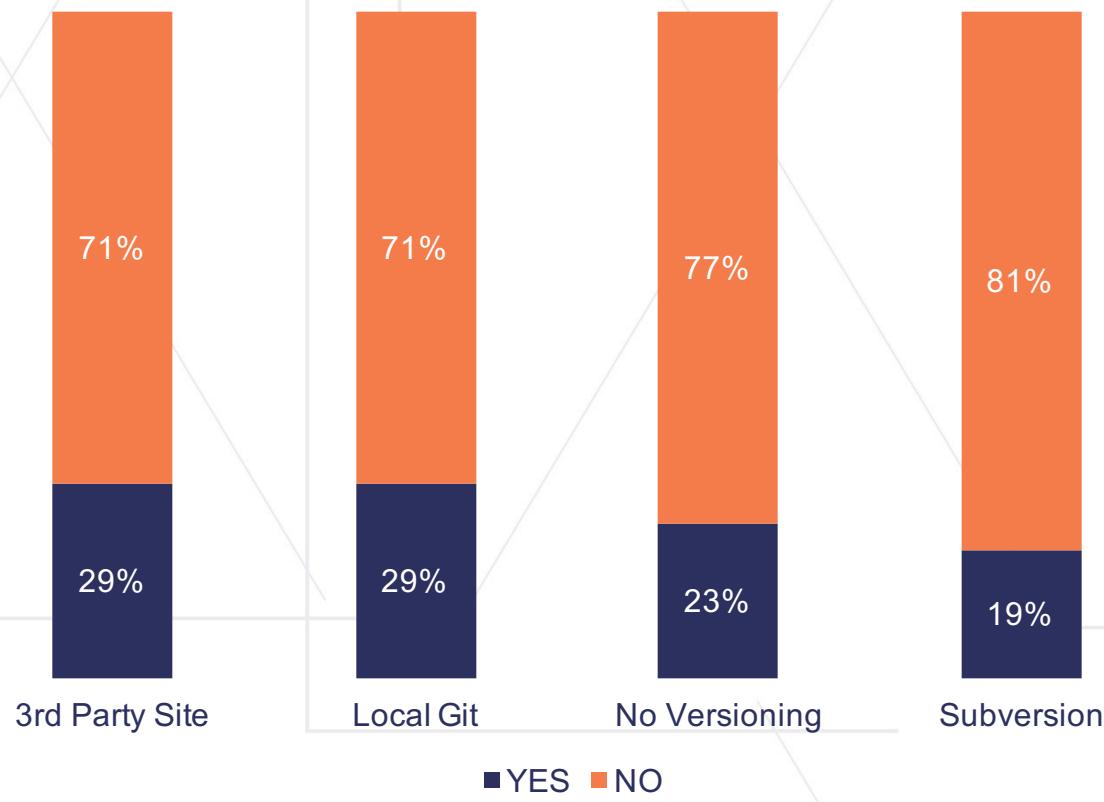
EXISTING CODE STORAGE

OKAY HOSTING ON GITHUB

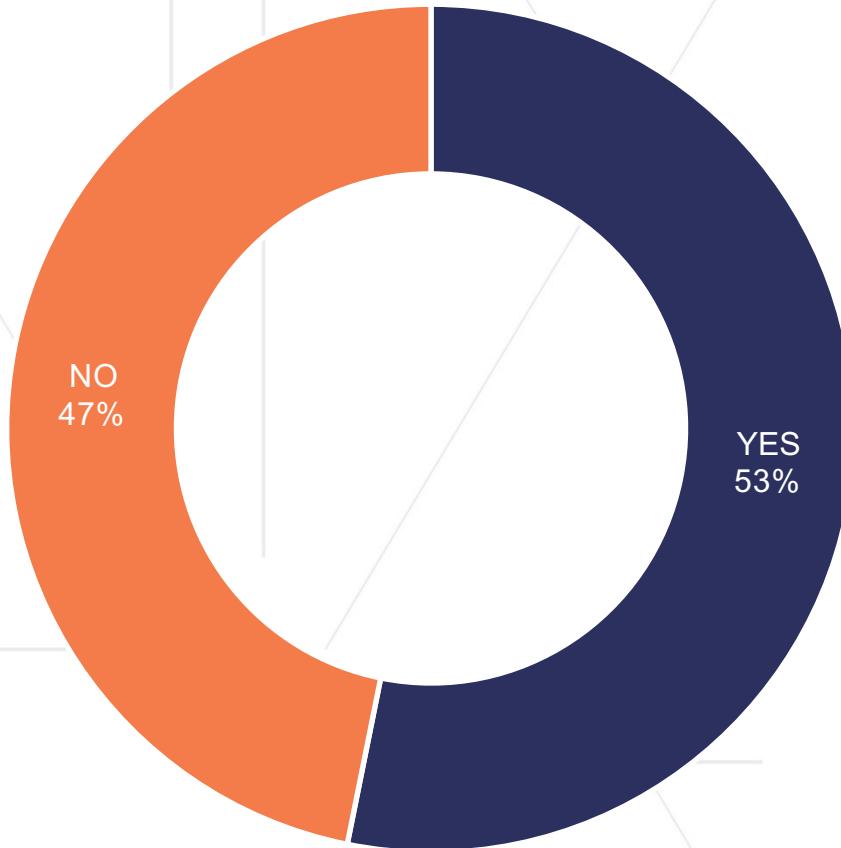
# GITHUB FOR ENTERPRISE



# CODE STORAGE



# OKAY HOSTING ON GITHUB



# OPINIONS FROM PEOPLE WHO CARE

01

I like this.

02

Love the potential networking and sharing of creativity.

03

This would greatly benefit all of UFIT and would be worth any expense.

04

This topic is the first useful thing I have seen on yammer.

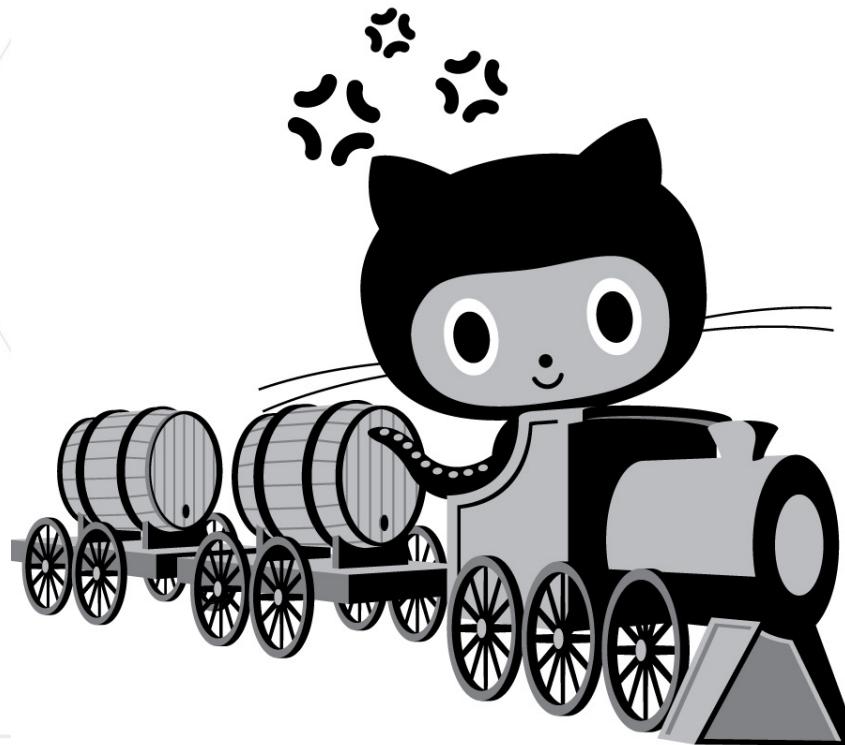
05

This would be a welcome resource for code-sharing in and among UF projects.

06

I think it is short sighted for UFIT to not try to centralize and protect the code that is being written to conduct official UF business.

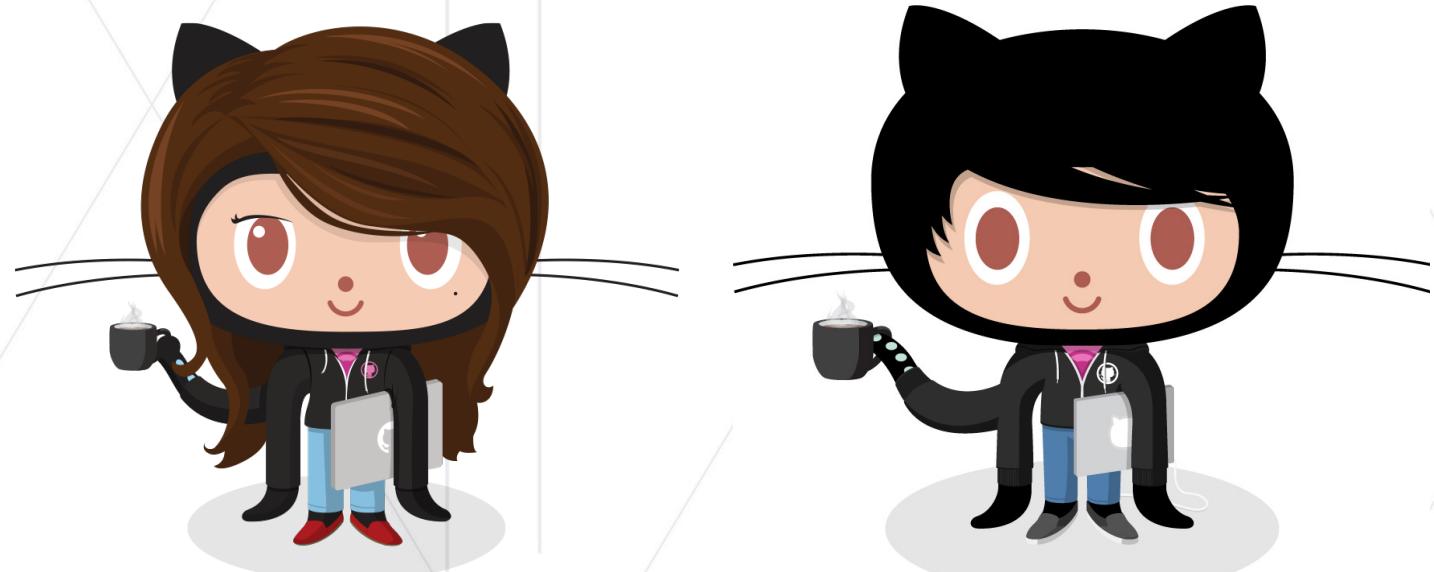
# THE FUTURE



The future is not a place we go!

# THE FUTURE

*CONTINUED*



The future is a place we make!

# CALL TO ACTION



**Share the value of Git & Github  
with anyone and everyone!**

# CALL TO ACTION

*CONTINUED*



**Talk to your director! Talk to your friends!  
Share your opinions on yammer!**



**So we can tear down some walls...**



**and build some baller things together!**



Thanks for BEARing with me until the end!

# QUESTIONS?

Productivity & Quality *increases*

Collaboration *increases*

Communication *increases*

Security *increases*

Imagine we adopt Github