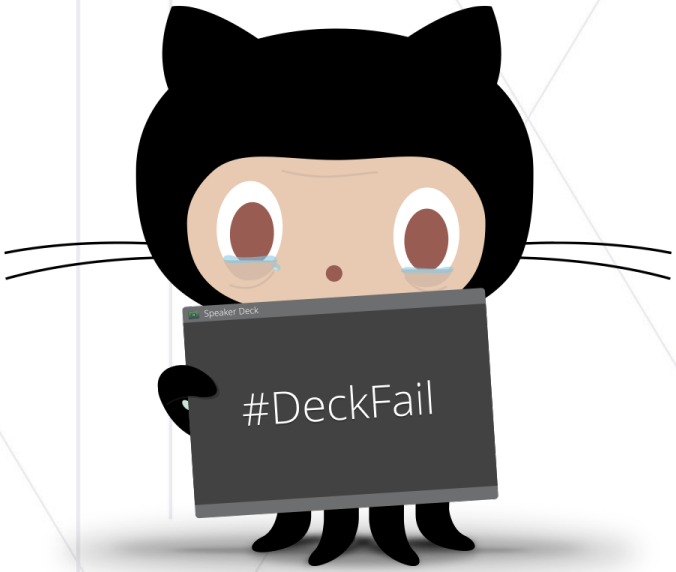
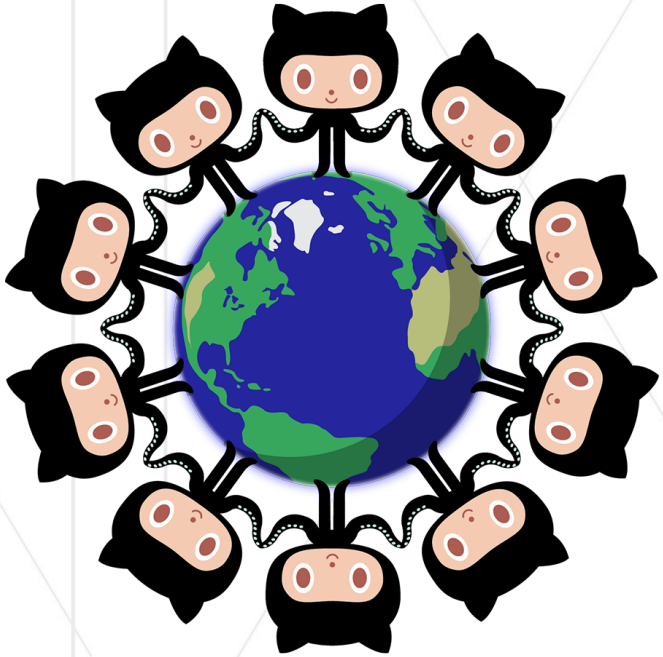
ALONE



Alone we can do so little;

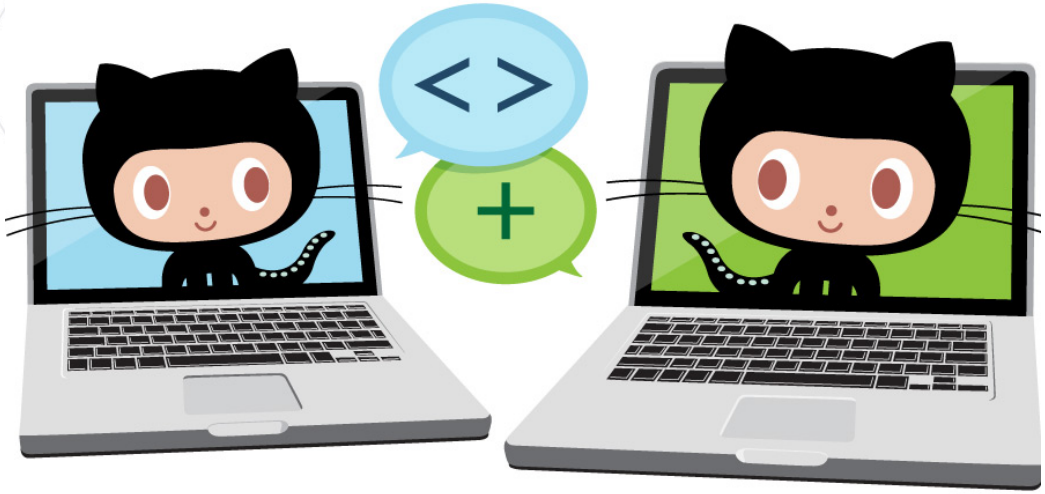
TOGETHER



together we can do so much.

– Helen Keller

GITHUB IS COLLABORATION & COMMUNITY

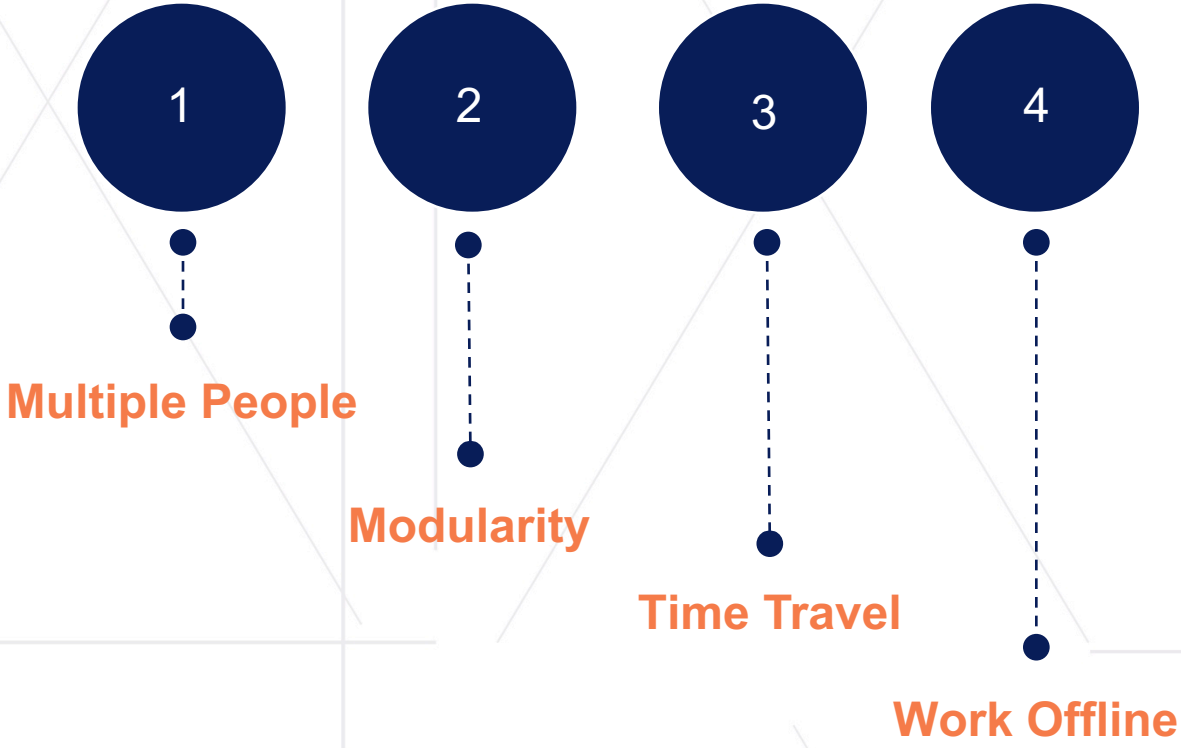


SHARE	CONTRIBUTE	HELP	GET HELP

UF

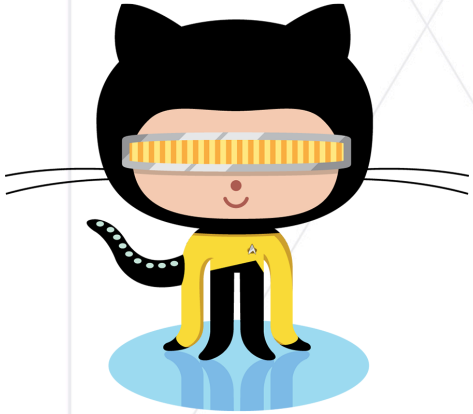
BEFORE GITHUB

WHY GIT?



UF

MULTIPLE PEOPLE

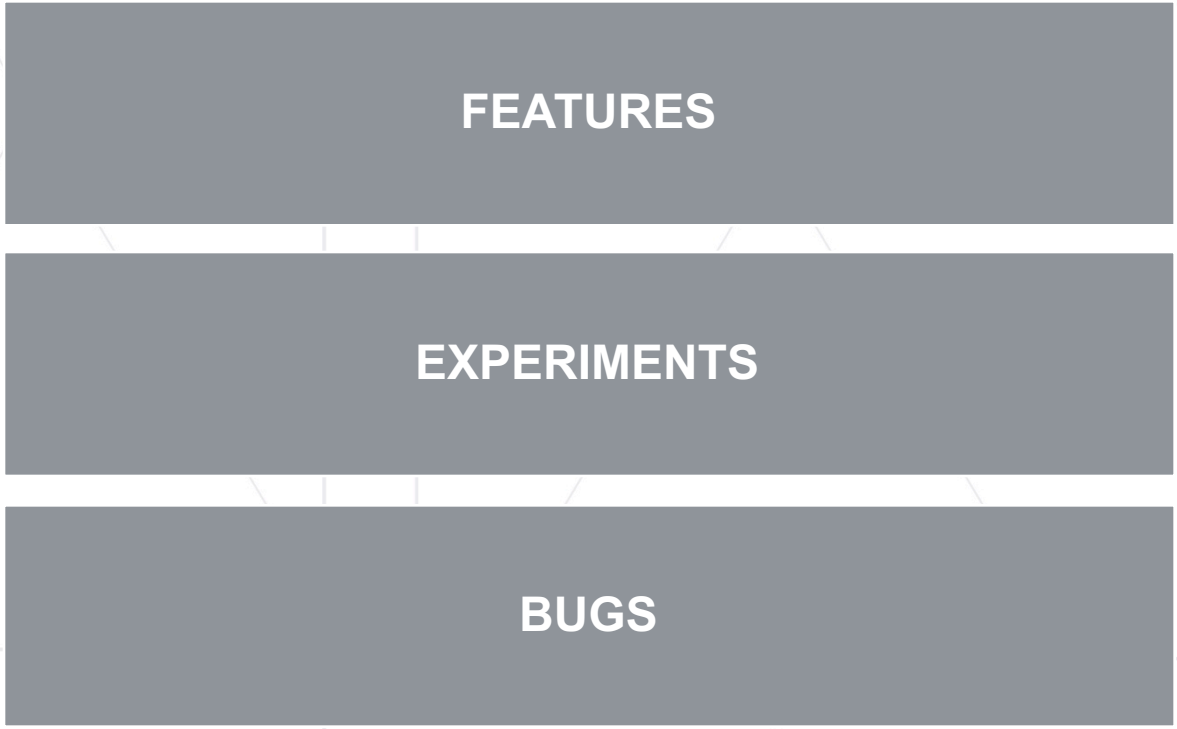


MULTIPLE PEOPLE

- 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)

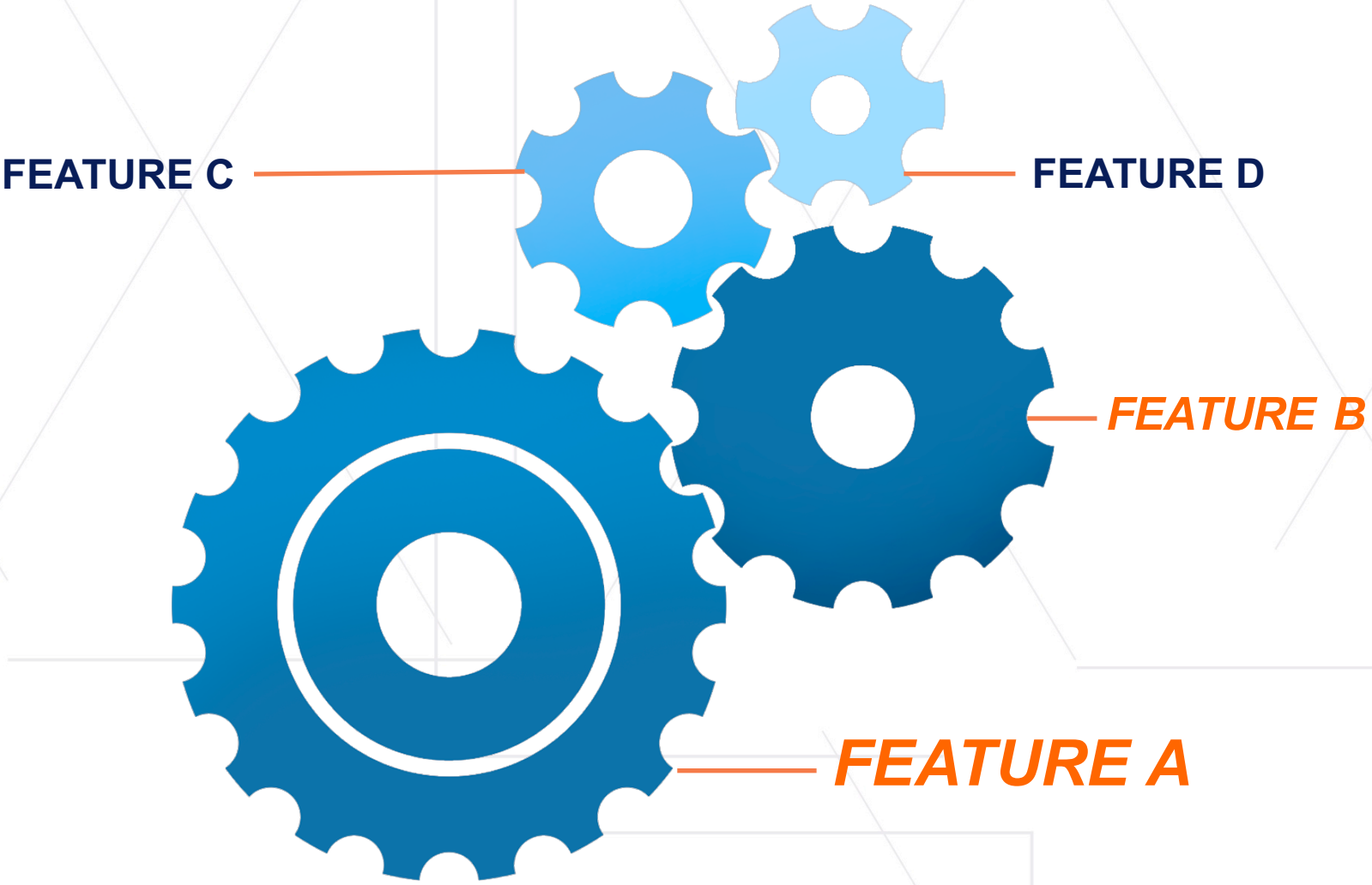
MODULARITY/BRANCHES

MODULARITY/BRANCHES



UF

FEATURES *MODULARITY*



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

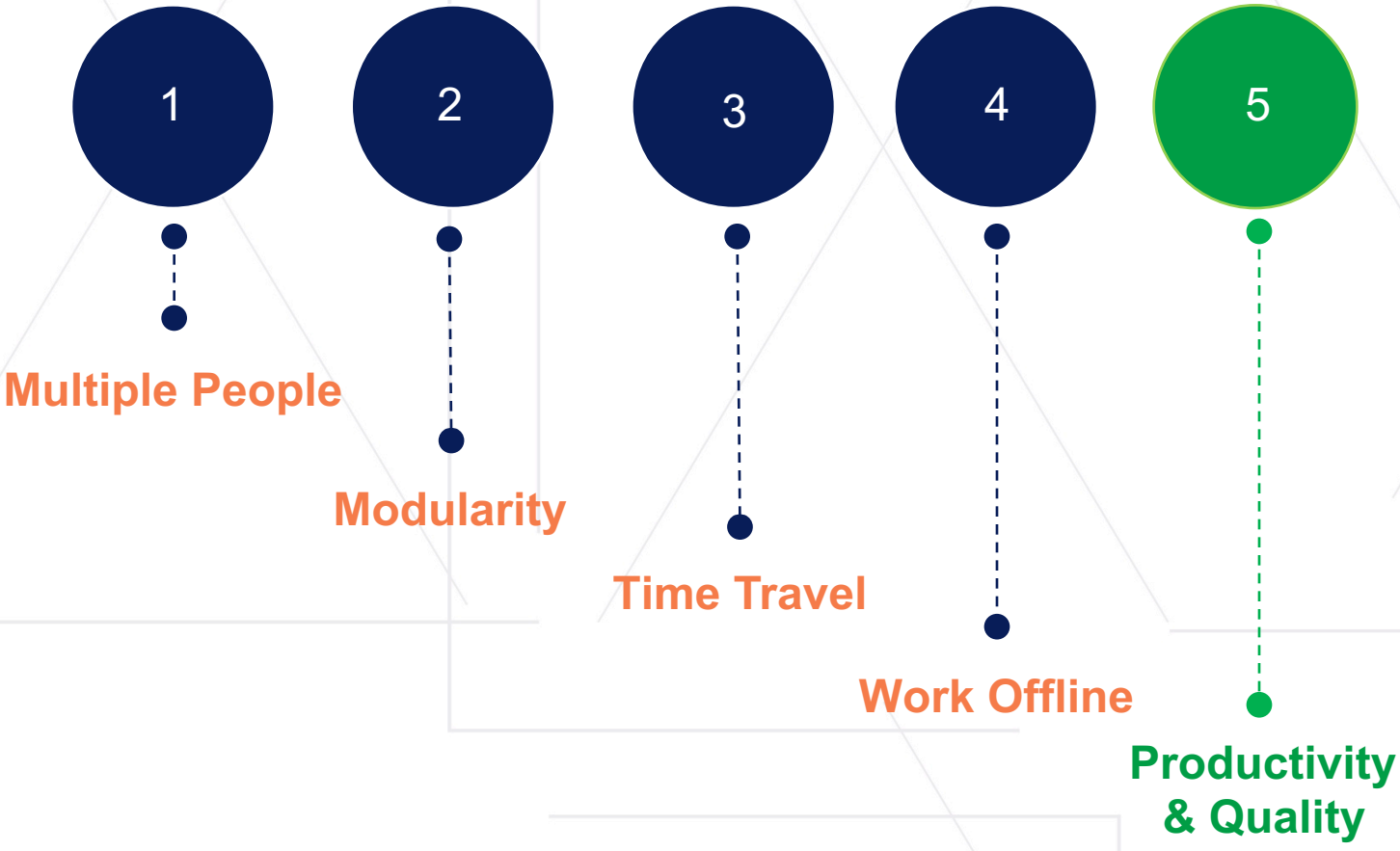
- Go back to any point in the history of development and review or restore code
- Remember what and why you did something in the past or in the present

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**

02 **Hosting** (*adoption*)

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

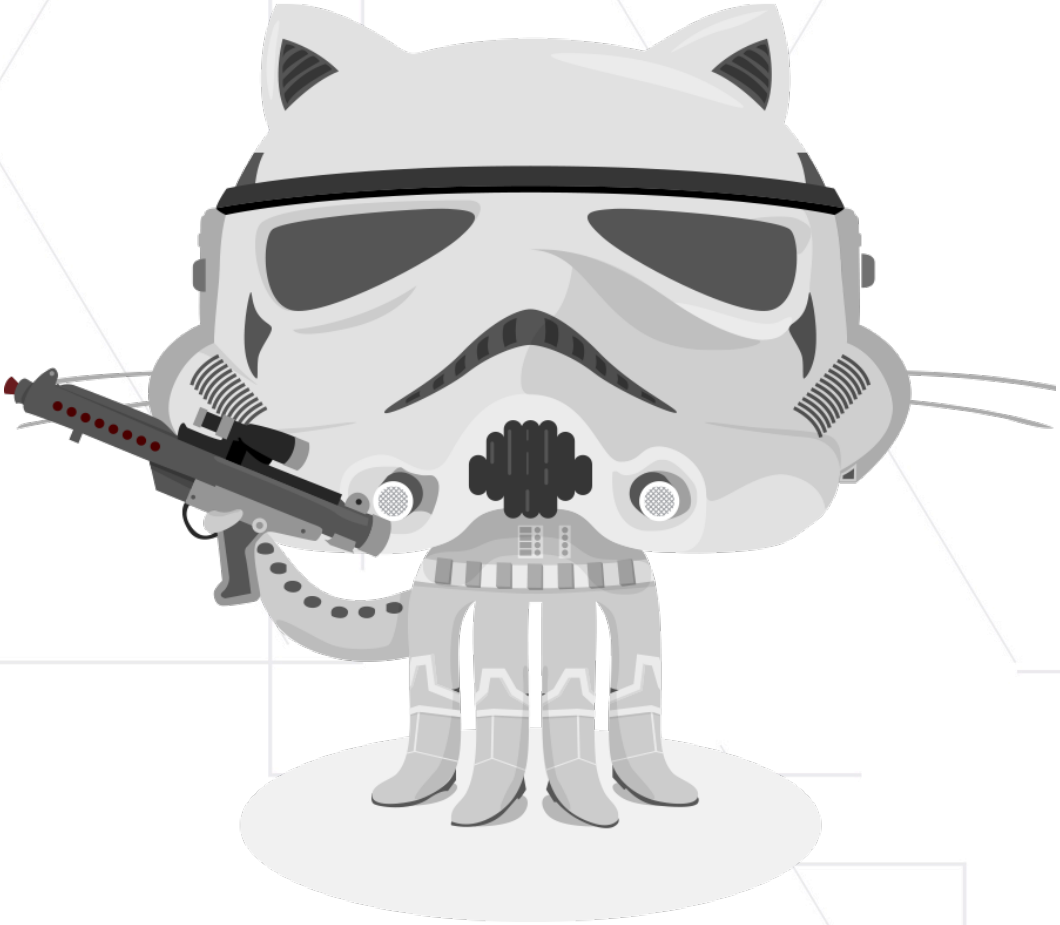
04 **Access** (*collaboration*)

05 **Communication** (*collaboration*)

06 **Collaboration**

UF

SECURITY *FEATURE*



SHIB, AD, 2FA *SECURITY*

Shibboleth®

SHIB, AD, 2FA *SECURITY*

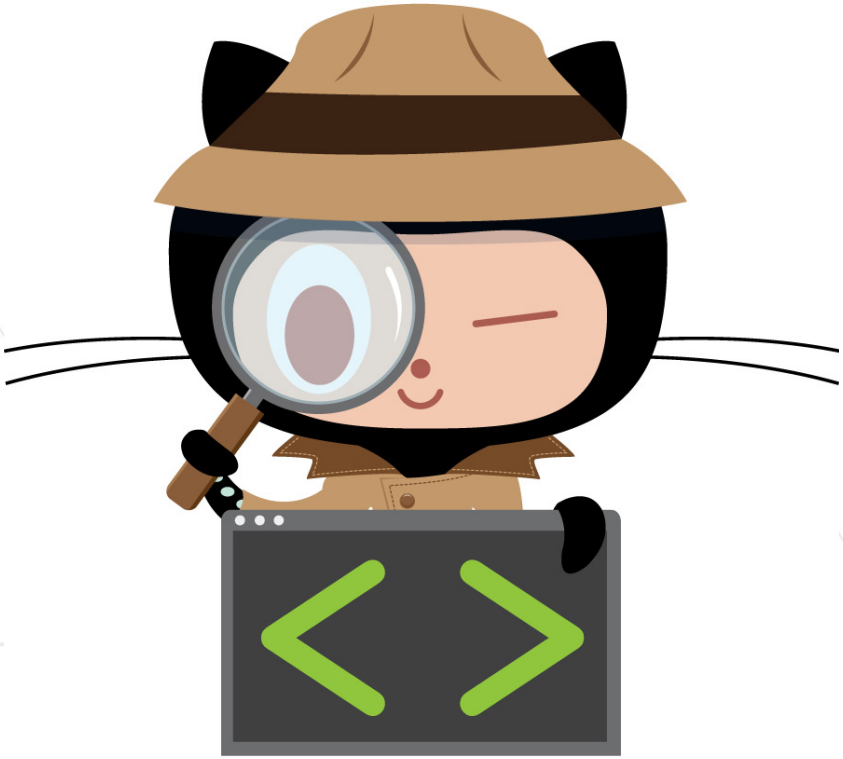
- Authorization for Github Enterprise is SAML/Shibboleth or Active Directory
- Login for Github off prem can use 2FA
- If you are currently using Github particularly with Facebook or Gmail credentials then you may want to turn on 2FA

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

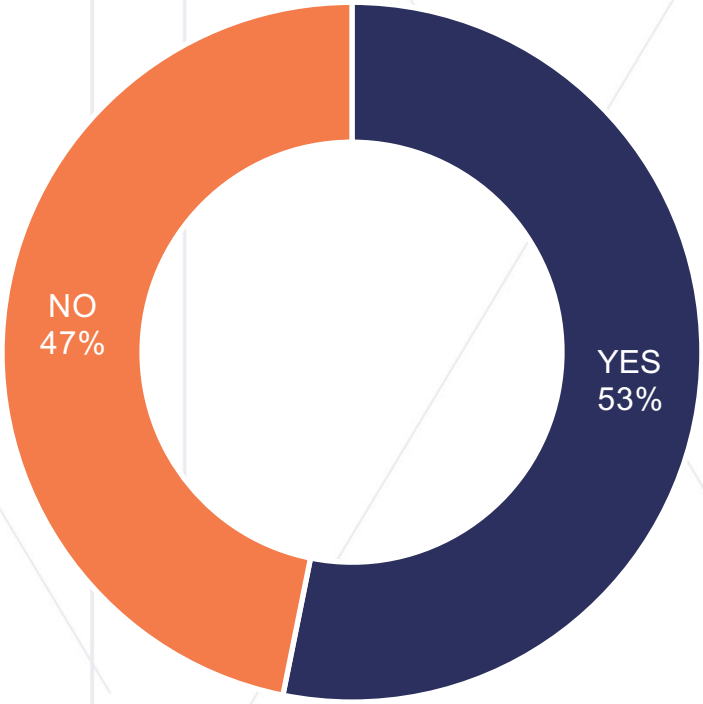
Bitbucket

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*

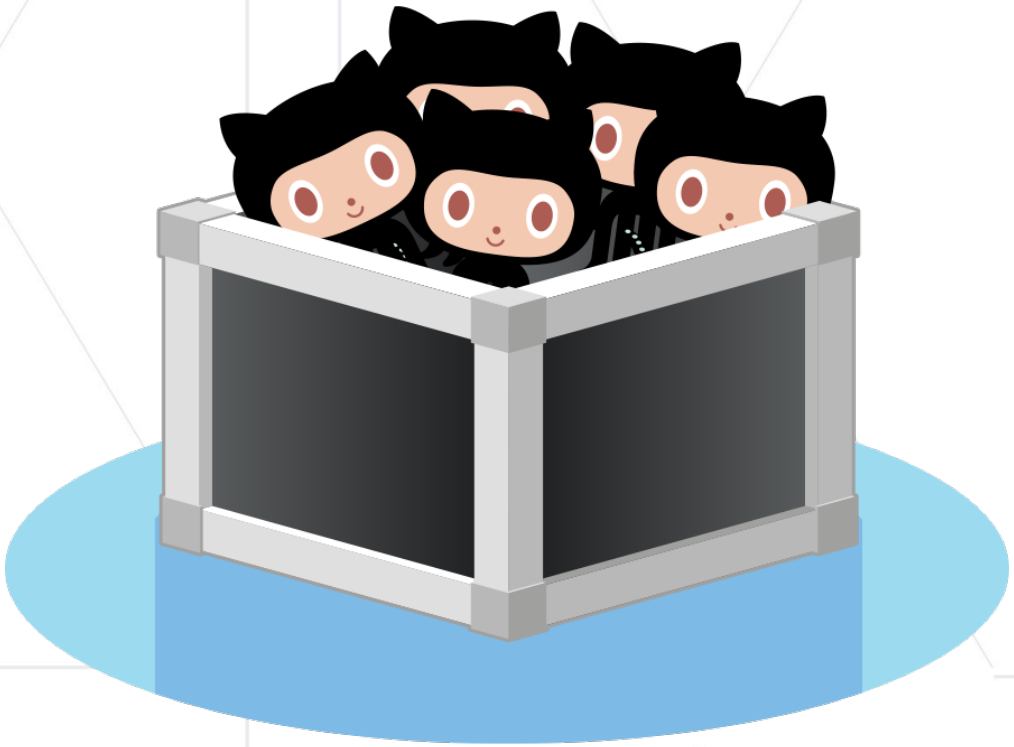


No means not comfortable hosting code on Github.

AFRAID *SECURITY*

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

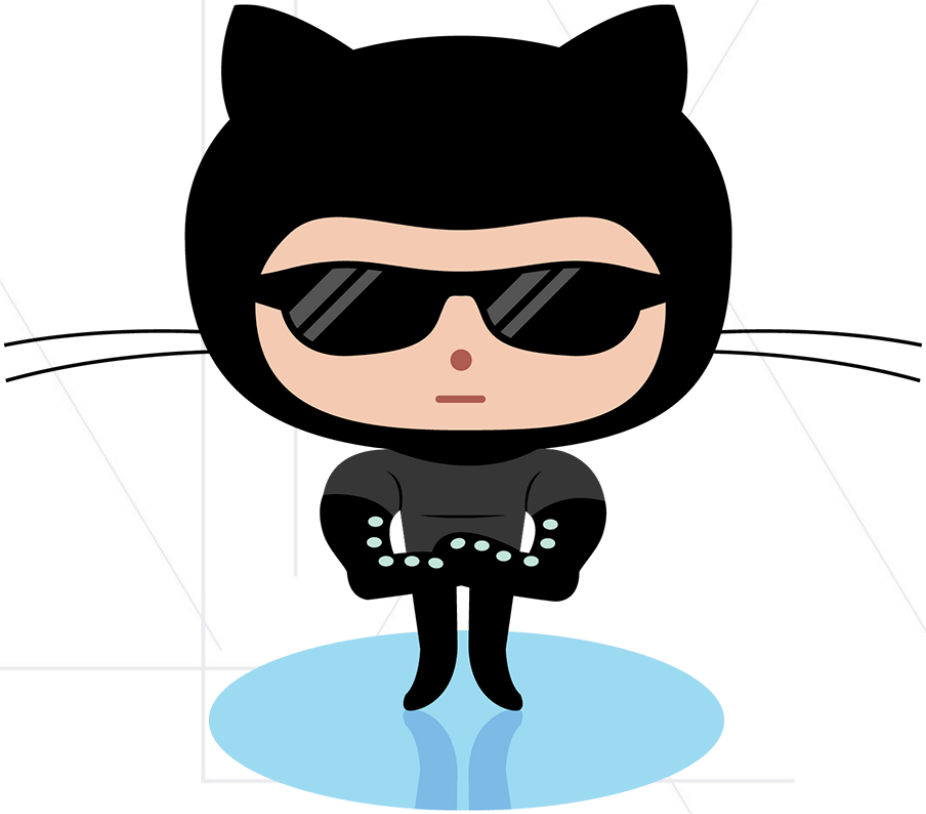
GIT HOSTING *FEATURE*



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*

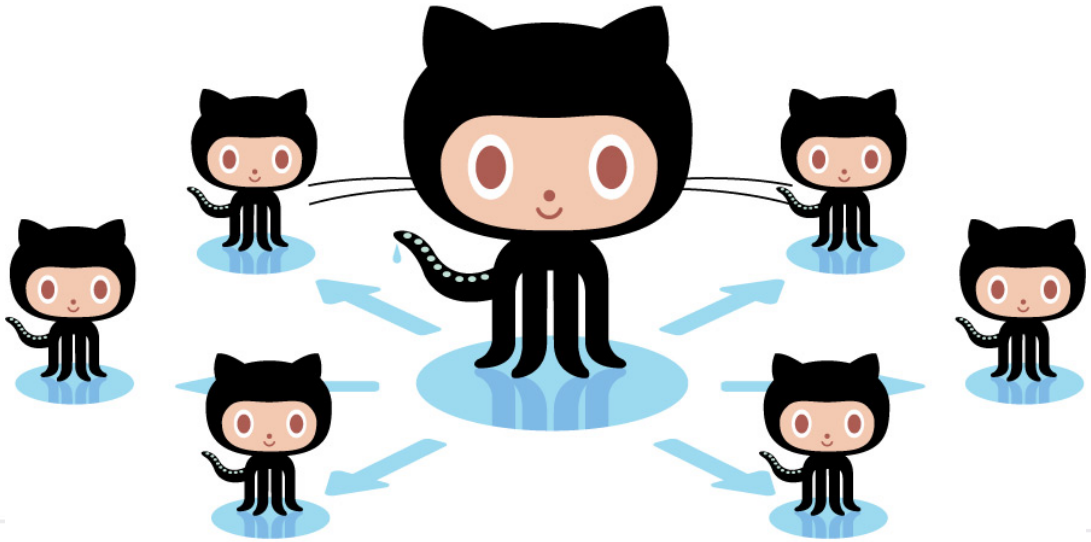
- Lowers barriers to collaboration
- If its too difficult people won't collaborate

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*



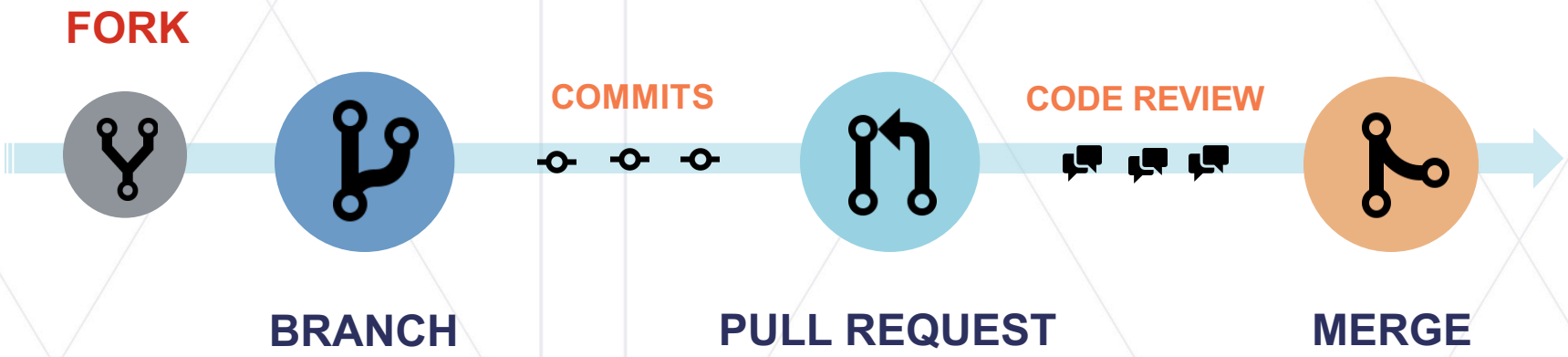
COMMUNICATION *FEATURE*

ISSUES & LABELS	CODE REVIEW
MILESTONES	COMMENT & DISCUSS
MARKDOWN	WIKI

All project communication in one place!

UF

COLLABORATION *FEATURES*



GitHub Flow / Feature Branch Workflow

UF

FORK *FEATURE*

FORK *FEATURE*

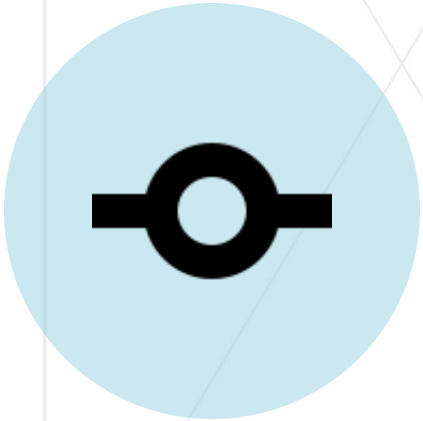
- You take a project you don't have write access to and make a copy of it under your own account so you can modify it
- Fork a project to work on features or bugs
- Fork a project to get a head start on your own project

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

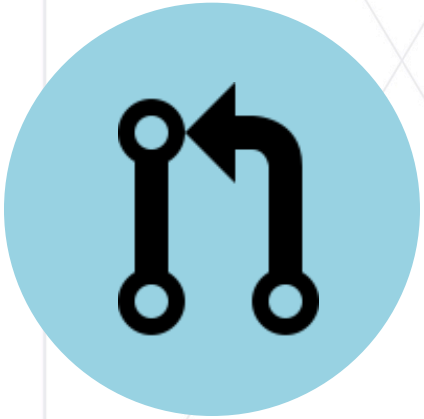
COMMIT *GIT FEATURE*



COMMIT *GIT FEATURE*

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

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

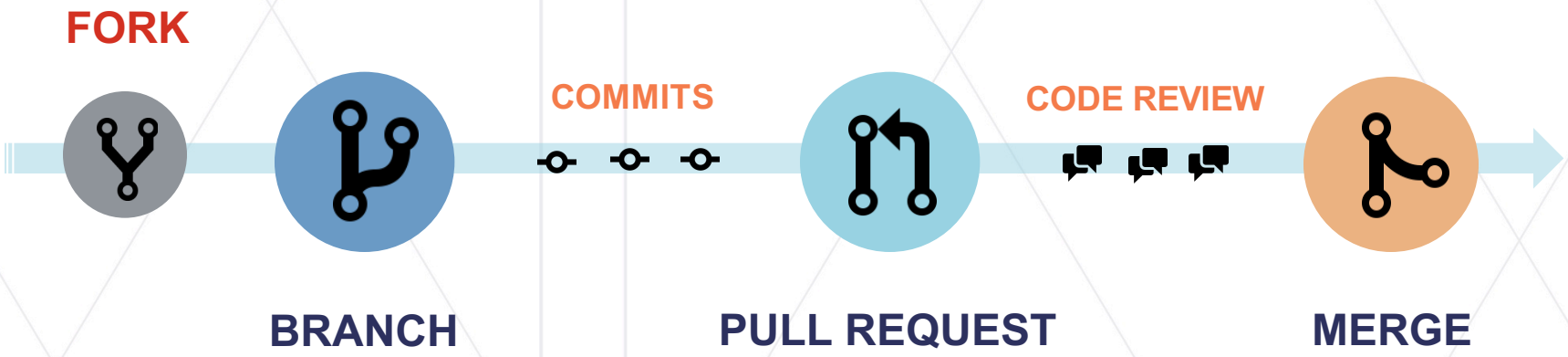
MERGE *GIT FEATURE*

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)

UF

COLLABORATION *FEATURES*



GitHub Flow / Feature Branch Workflow

UF

UF GITHUB

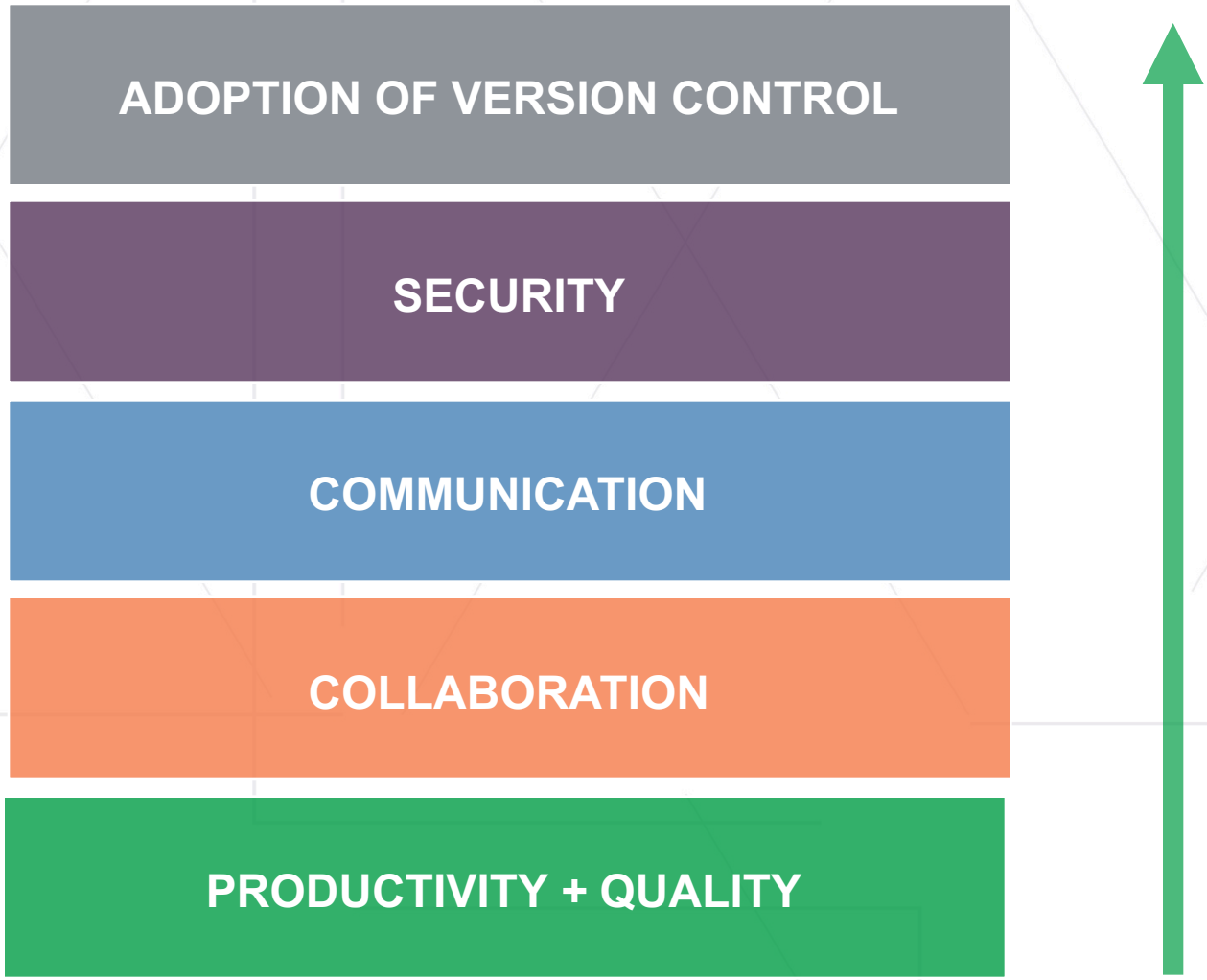
MOST UF PROJECTS OPEN SOURCED

CODE ACCESSIBLE TO ALL UFIT WORKERS

CODE CLOSED TO ALL NON UFIT WORKERS

UNLIMITED COLLABORATION OPPERTUNITIES

WHY GITHUB? *IN REVIEW*



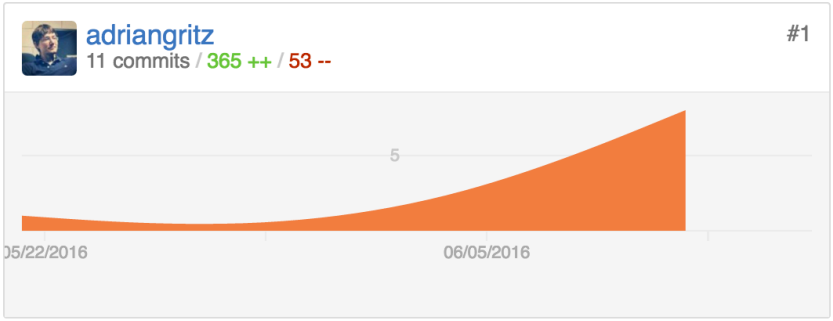
GIT SMARTER

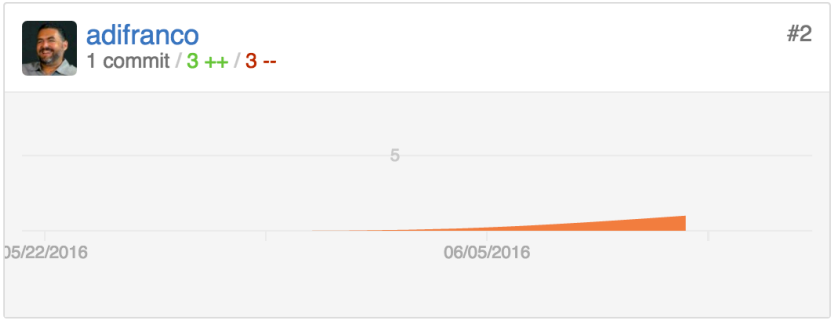
http://adriangritz.github.io/git-real-presentation/

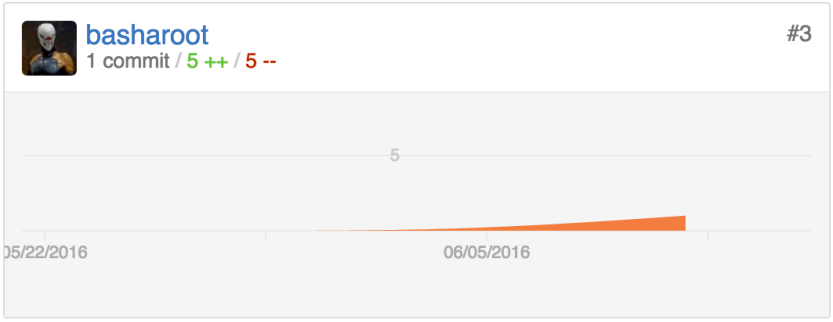
UF

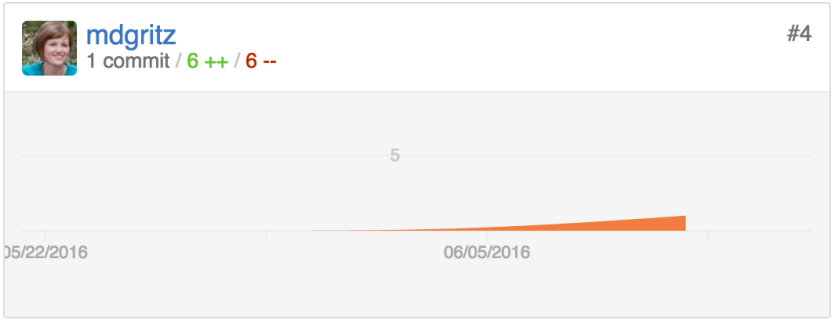
THANK YOU

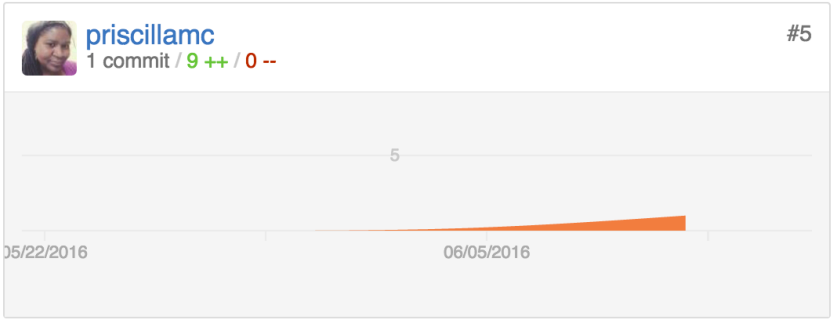
GIT SMARTER CONTRIBUTORS

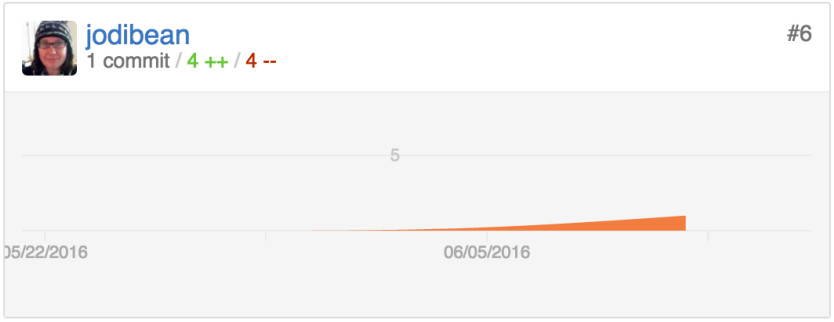






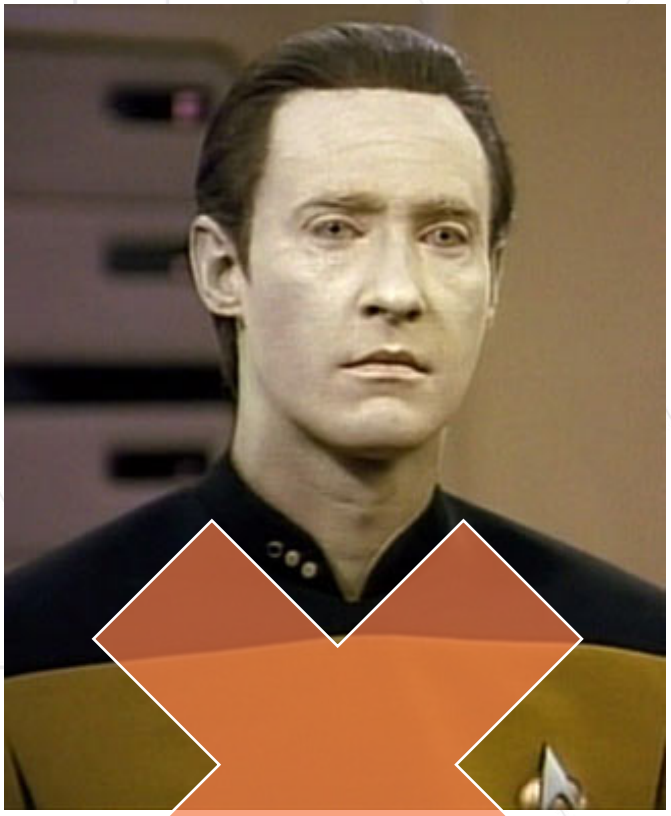




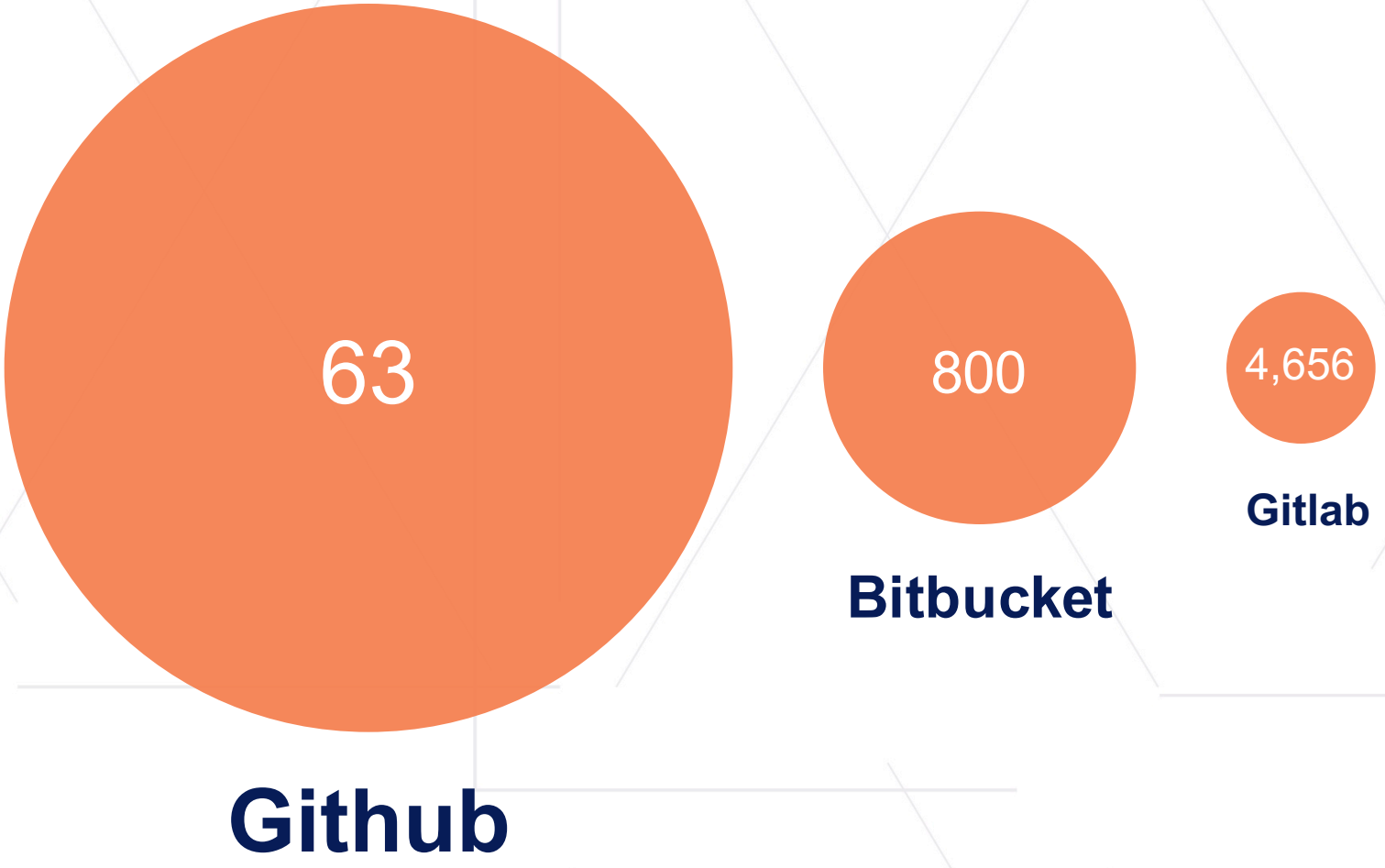


UF

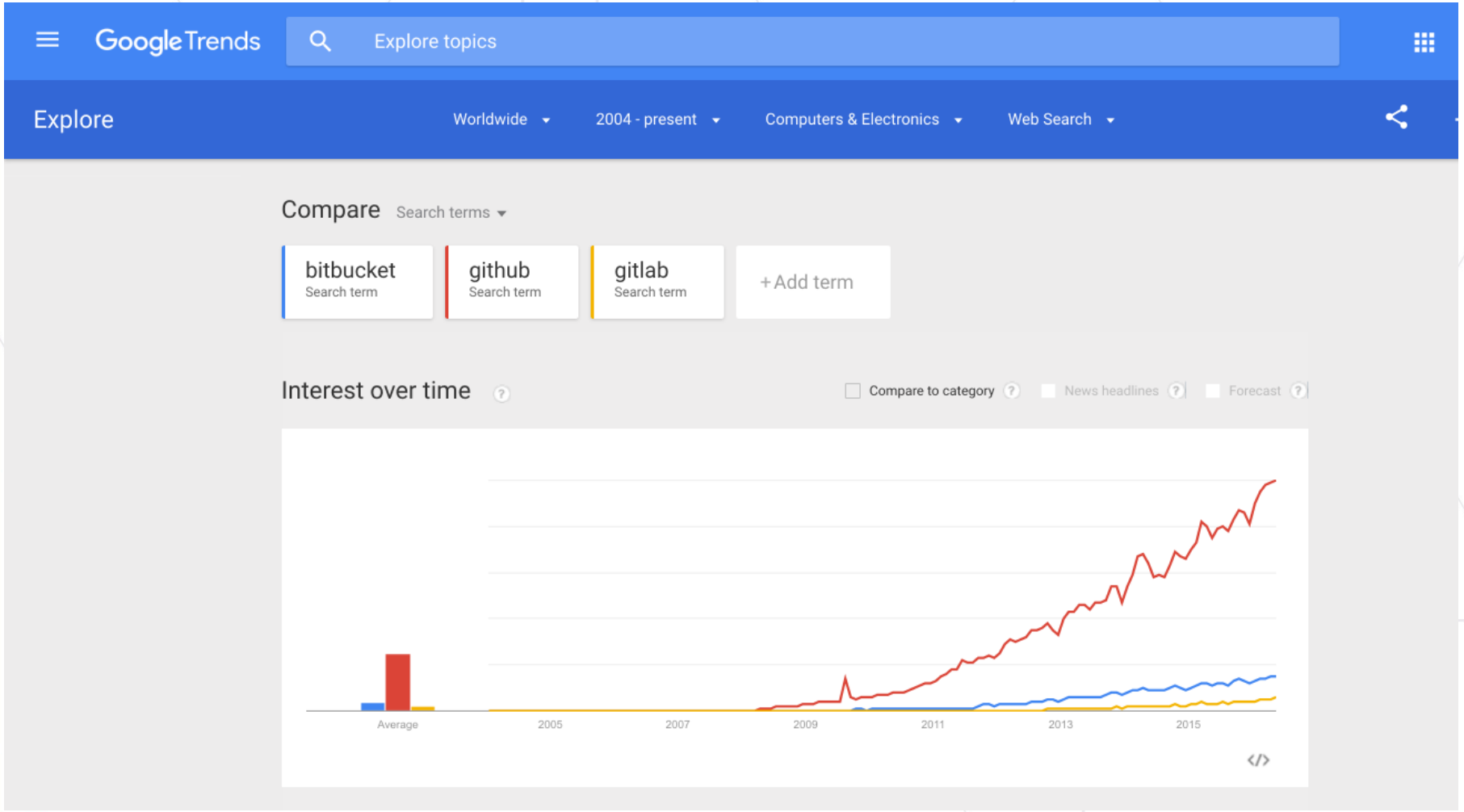
DATA



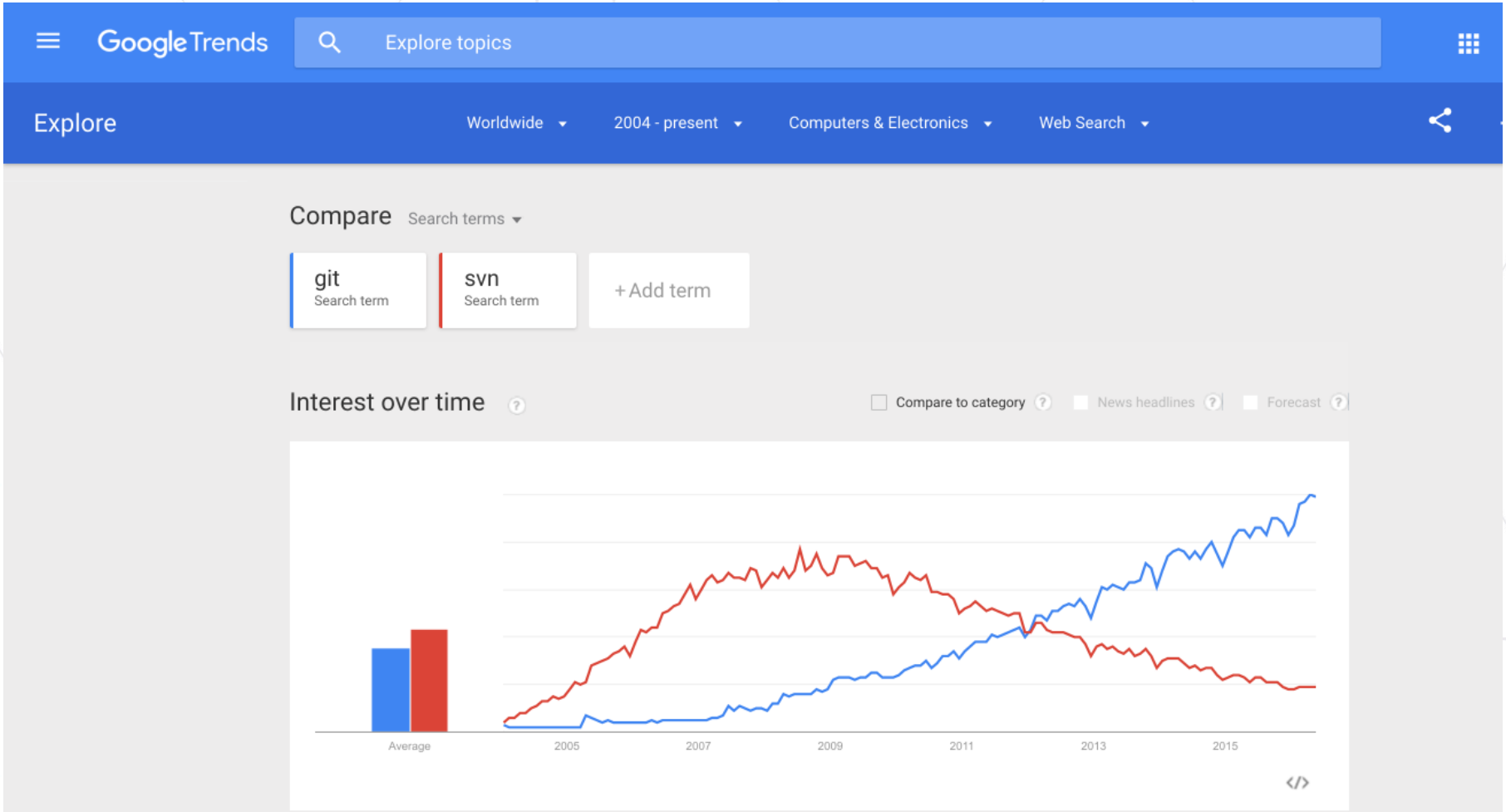
WORLD POPULARITY



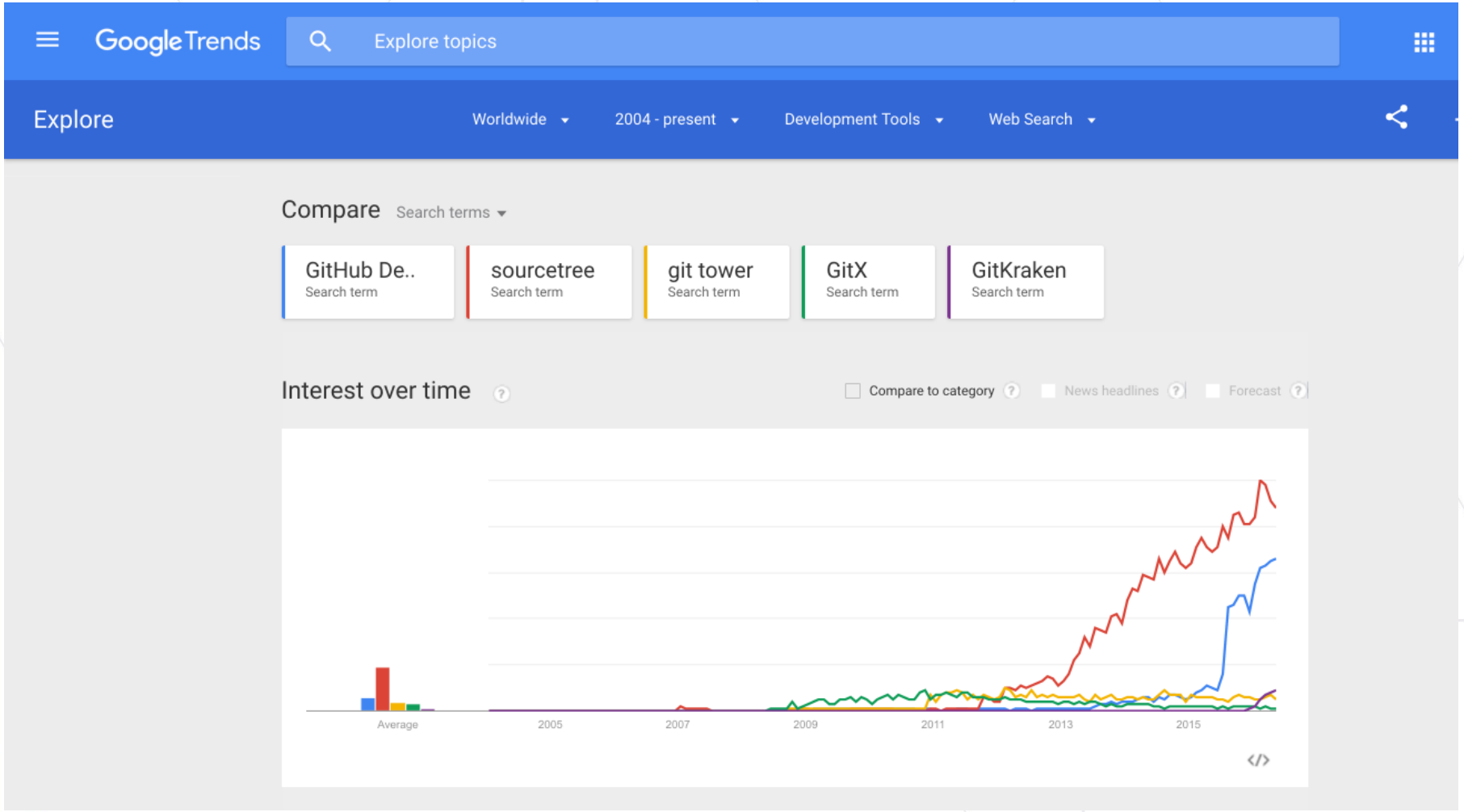
GIT HOSTING


Google Trends
Explore topics
Explore
Worldwide
2004 - present
Computers & Electronics
Web Search
Compare
Search terms
bitbucket
Search term
github
Search term
gitlab
Search term
+ Add term
Interest over time
Compare to category
News headlines
Forecast
Average
2005
2007
2009
2011
2013
2015

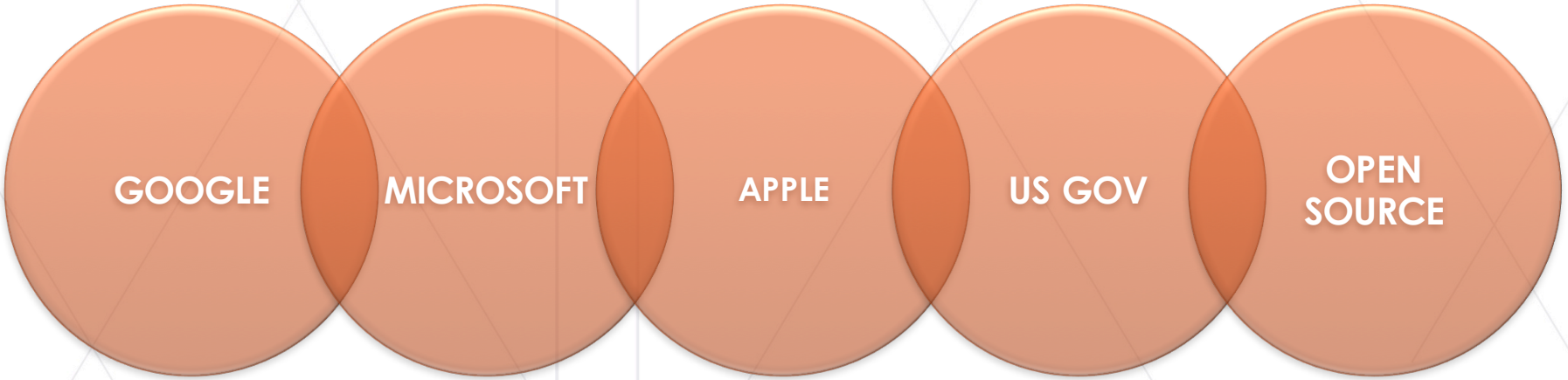
GIT vs SVN


Google Trends
Explore topics
Explore
Worldwide
2004 - present
Computers & Electronics
Web Search
Compare
Search terms
git
Search term
svn
Search term
+ Add term
Interest over time
Compare to category
News headlines
Forecast
Average
2005
2007
2009
2011
2013
2015

GIT GUI


Google Trends
Explore topics
Explore
Worldwide
2004 - present
Development Tools
Web Search
Compare
Search terms
GitHub De..
Search term
sourcetree
Search term
git tower
Search term
GitX
Search term
GitKraken
Search term
Interest over time
Compare to category
News headlines
Forecast
Average
2005
2007
2009
2011
2013
2015

COMPANIES USING GITHUB



GITHUB FOR ENTERPRISE SURVEY RESULTS

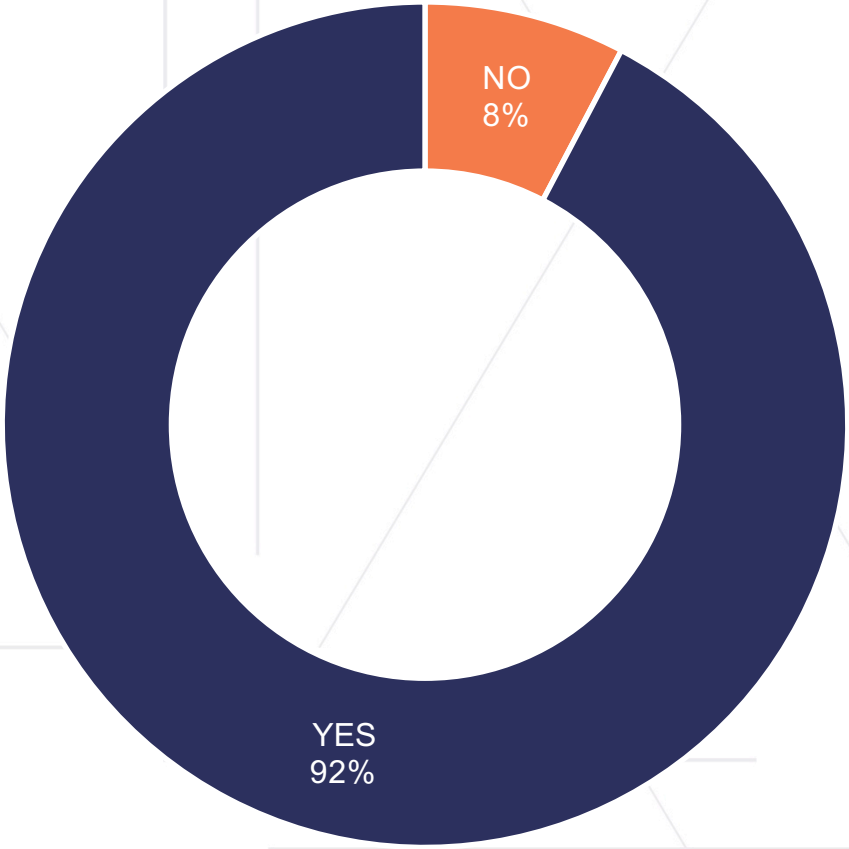
GITHUB FOR ENTERPRISE

EXISTING CODE STORAGE

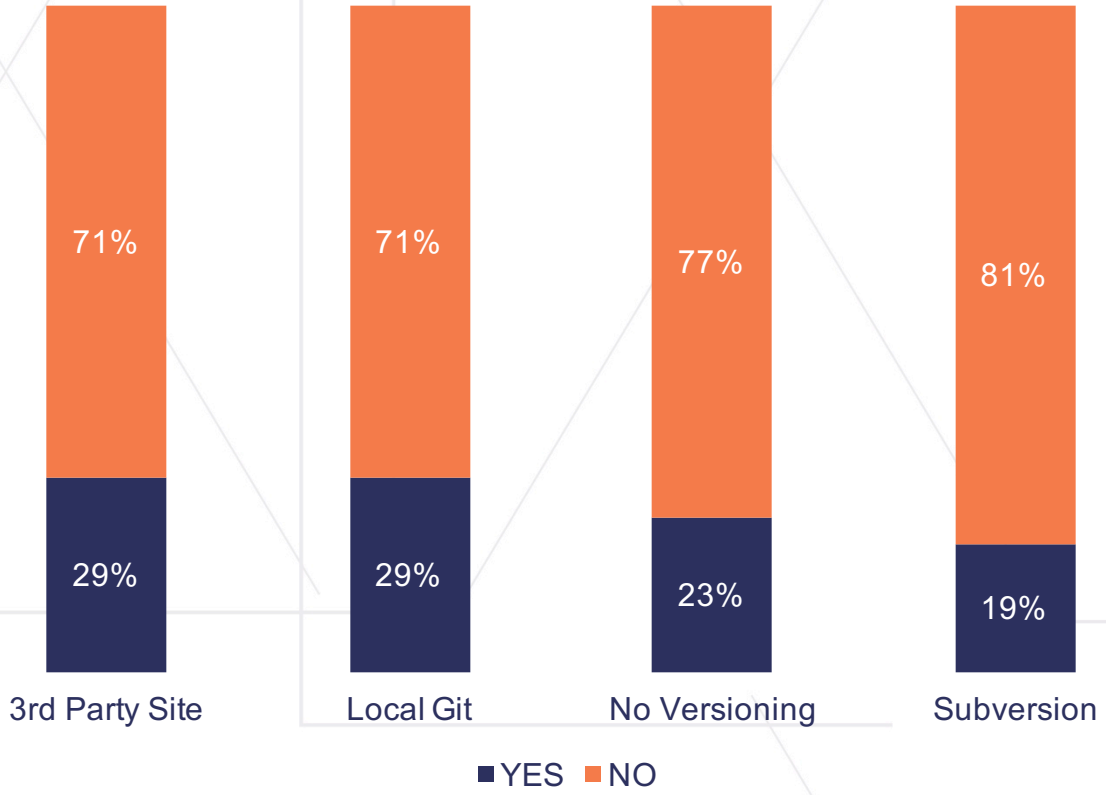
OKAY HOSTING ON GITHUB

UF

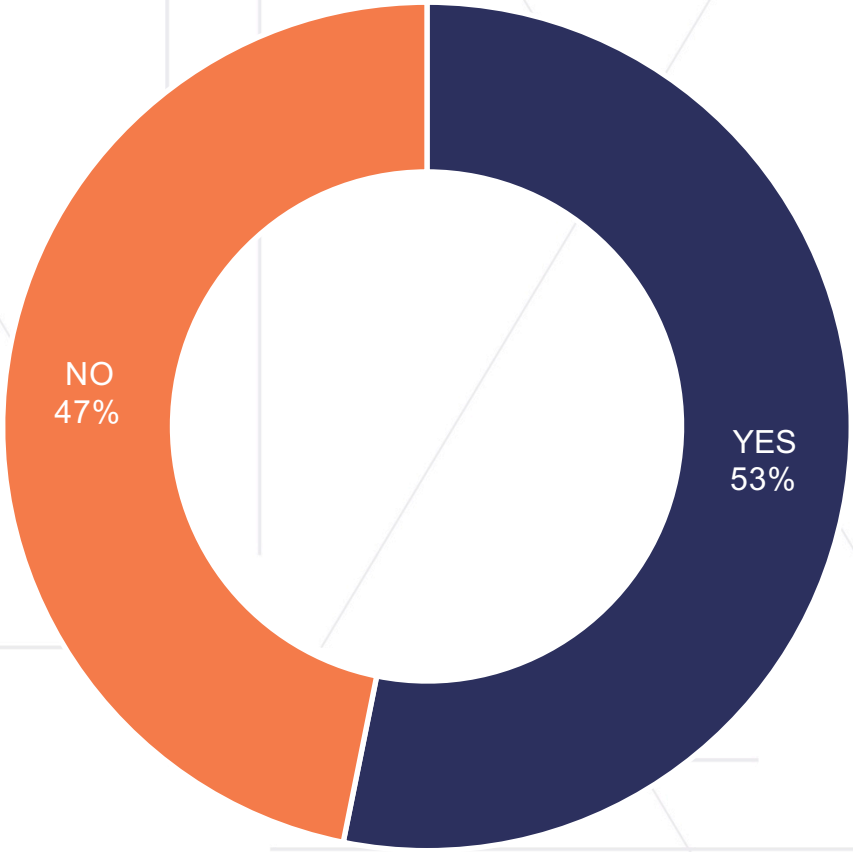
GITHUB FOR ENTERPRISE



CODE STORAGE



OKAY HOSTING ON GITHUB



OPINIONS FROM PEOPLE WHO CARE

01 I like this.

02 Love the potential networking and sharing of creativity.

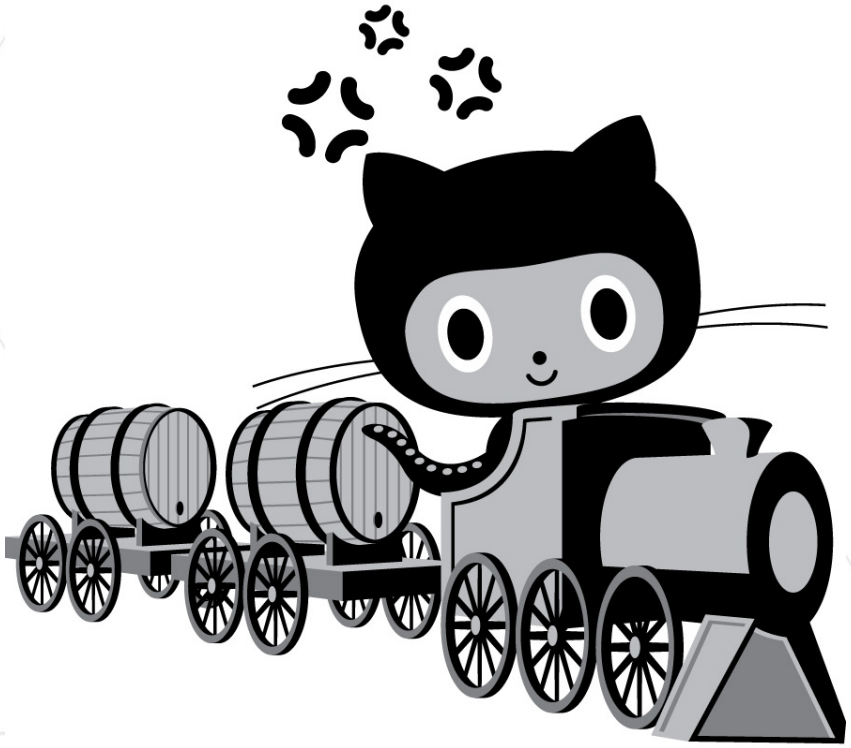
03 This would greatly benefit all of UFIT and would be worth any expense.

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.

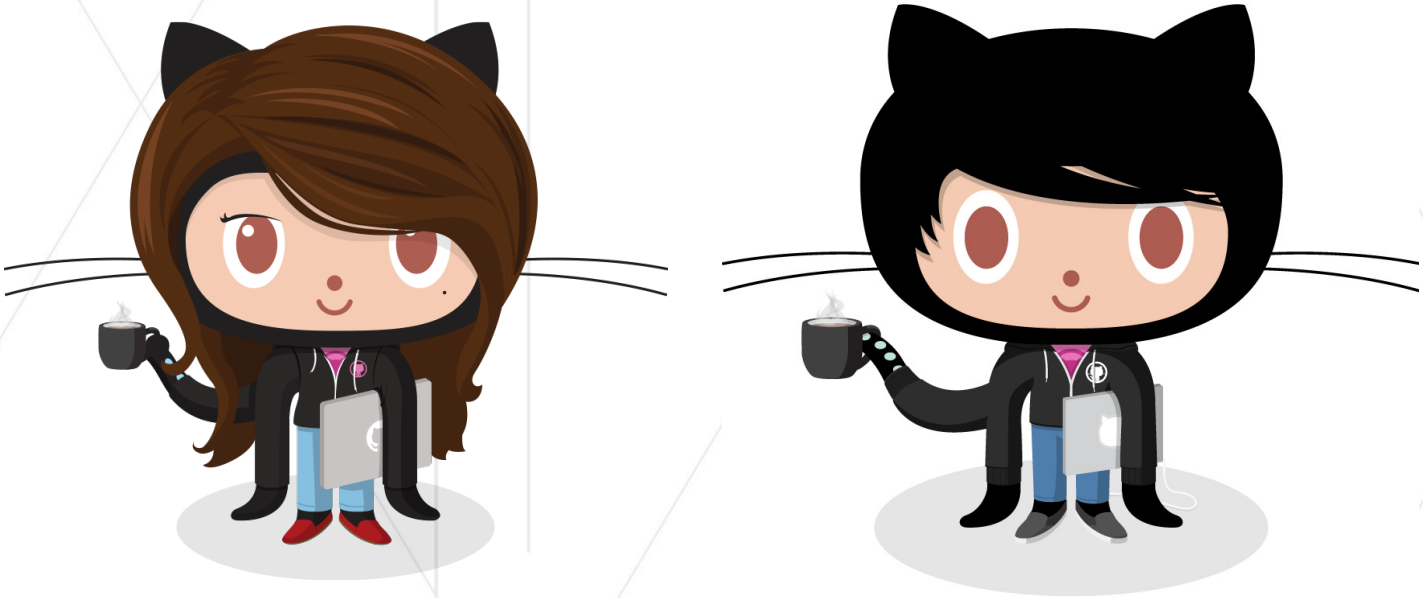
06 I think it is short sighted for UFIT to not try to centralize and protect the code that is being written to conduct official UF business.

THE FUTURE



The future is not a place we go!

THE FUTURE *CONTINUED*



The future is a place we make!

UF

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?

Collaboration *increases*

Communication *increases*

Productivity & Quality *increases*

Security *increases*

Imagine we adopt Github