

GITHUB IS A
SOLUTION



WHAT COULD BE

TO COMMON
PROBLEMS



WHAT IS

THE PROBLEMS



WHAT IS

FRAGMENTATION

GIT

SVN

OTHER

NOTHING

GITHUB

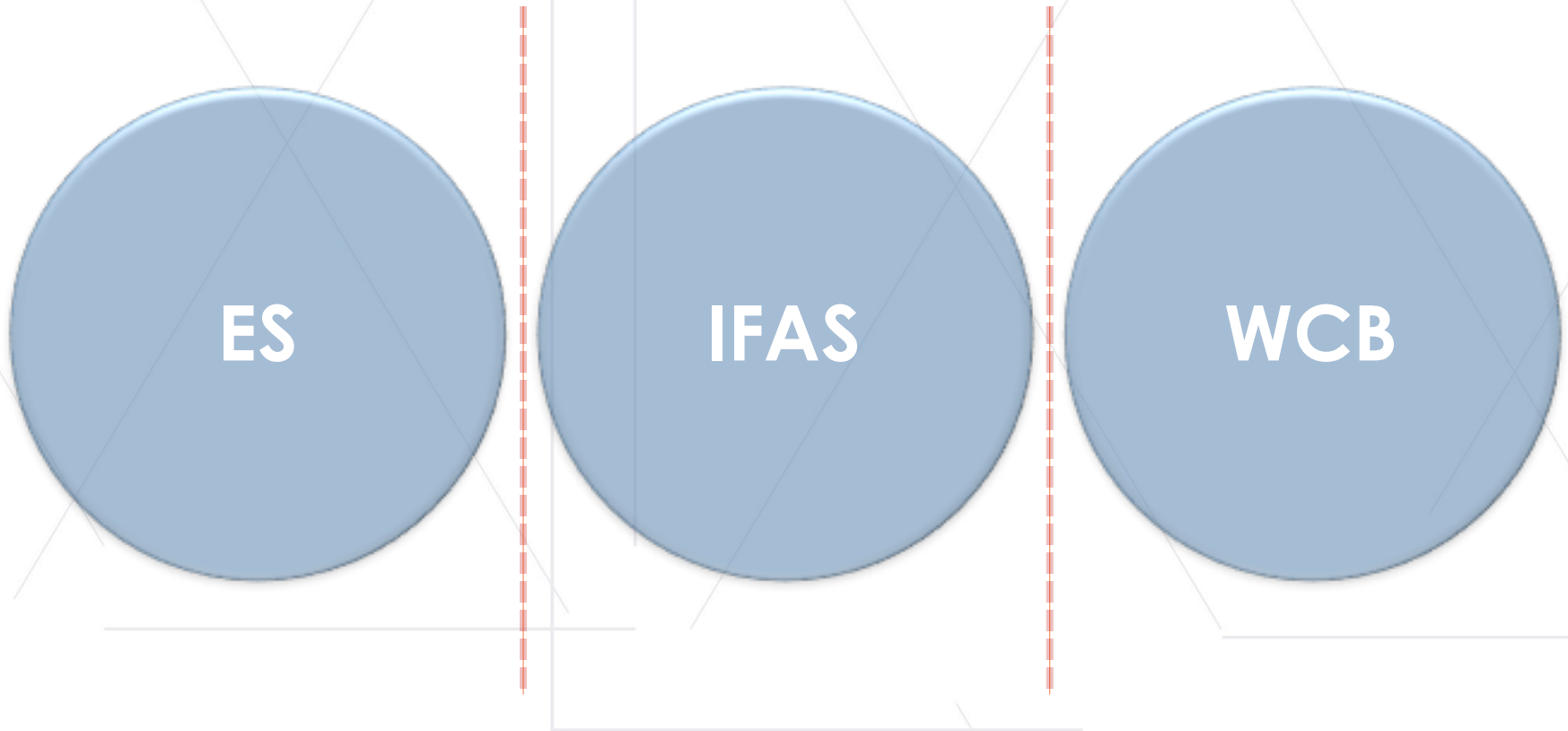
BITBUCKET

GITLAB

OTHER

- problem

BARRIERS



- problem

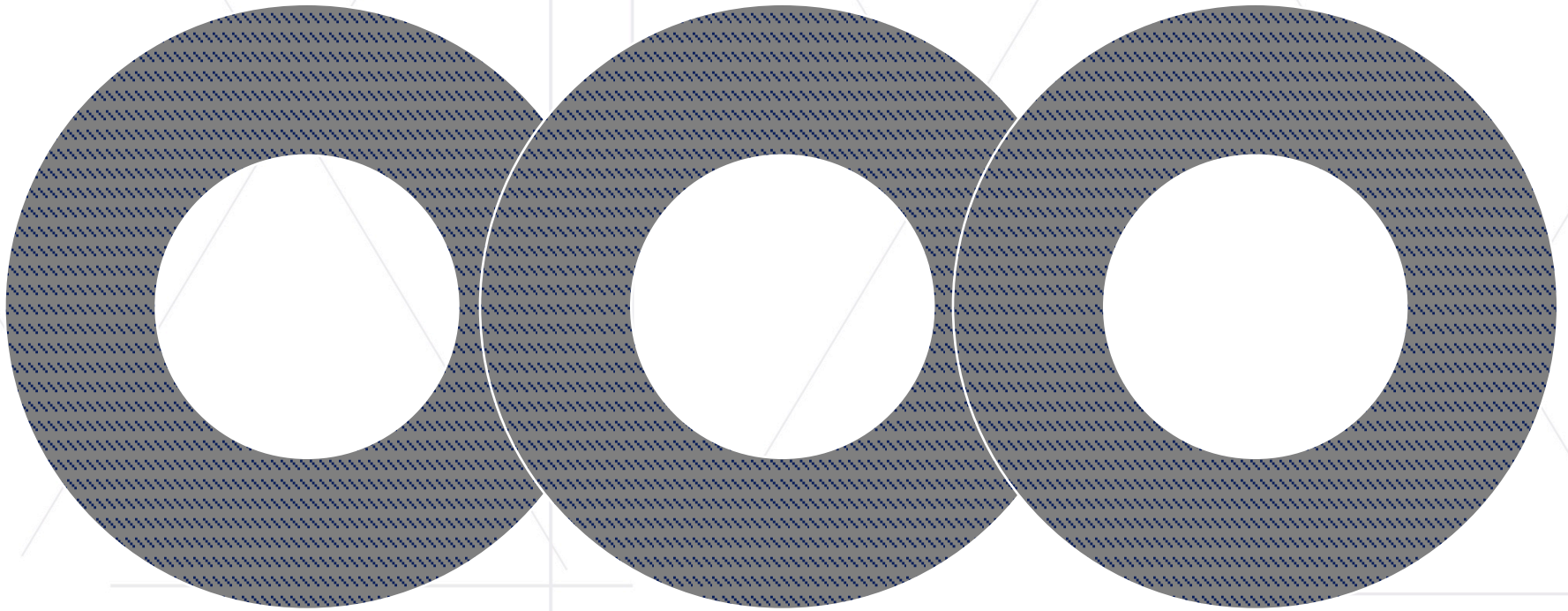
COLLABORATION



Collaboration is hard to find!

- problem

REINVENTING THE WHEEL



- problem

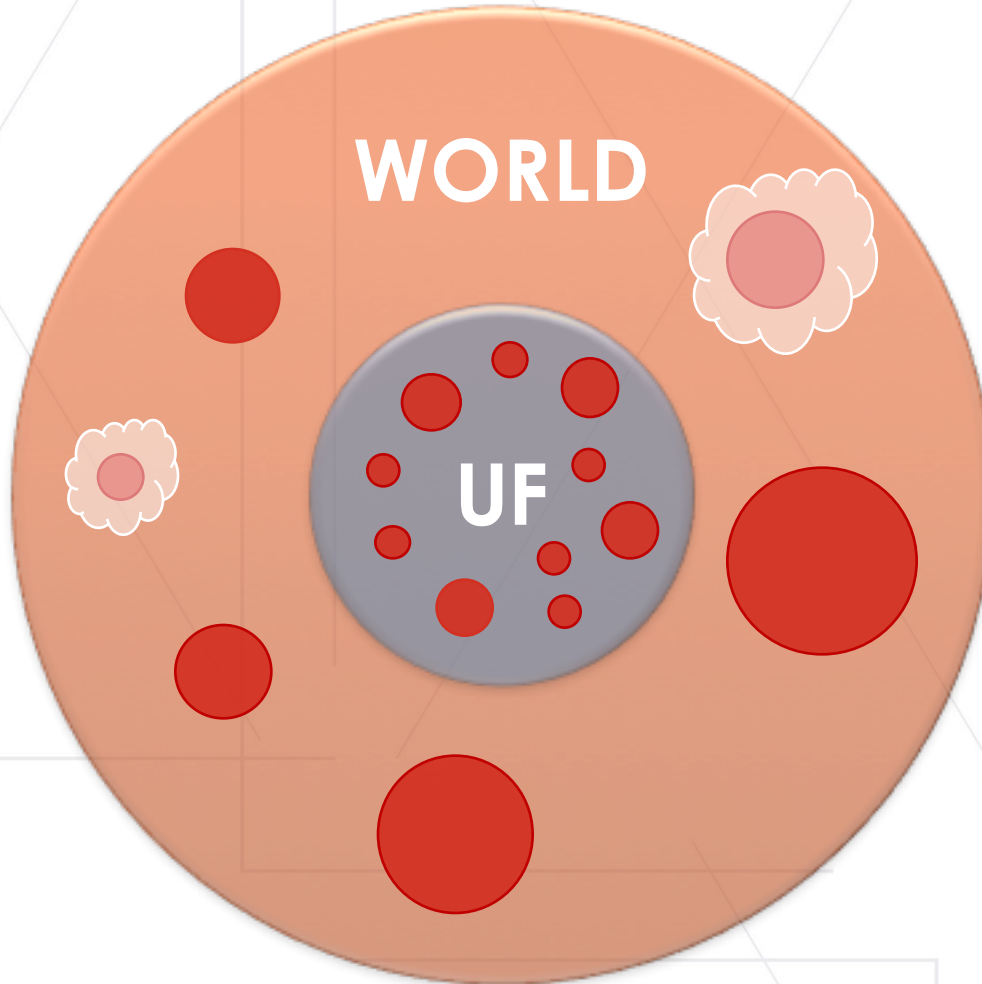
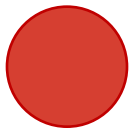
RISK

WORLD

UF

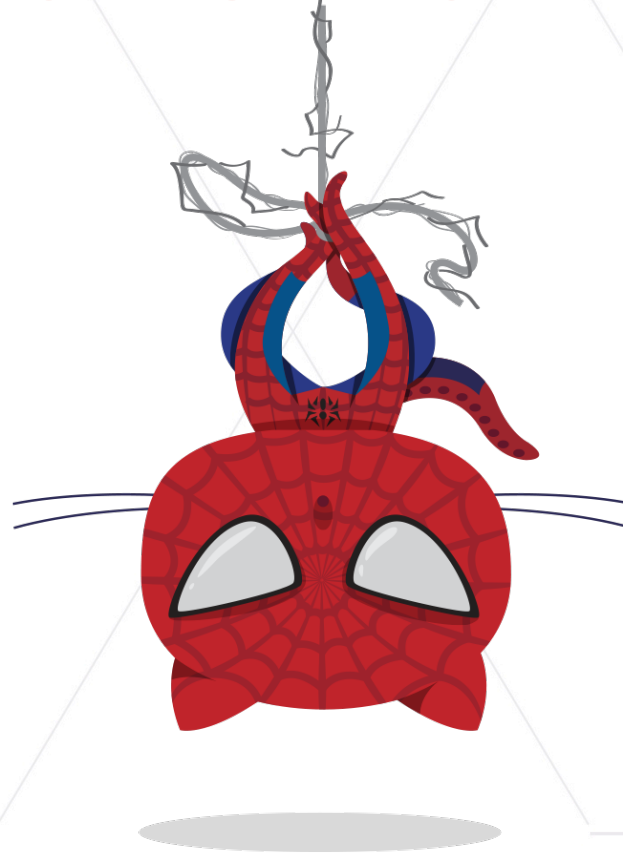
LEGEND

SERVICES
CODE
PASSWORDS



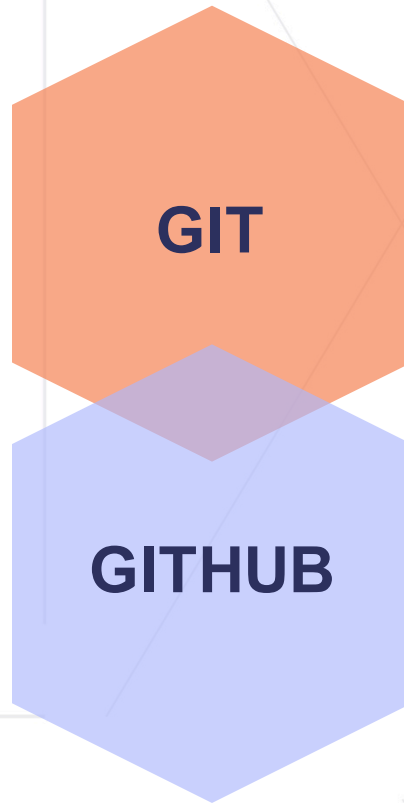
- problem

THE SOLUTION



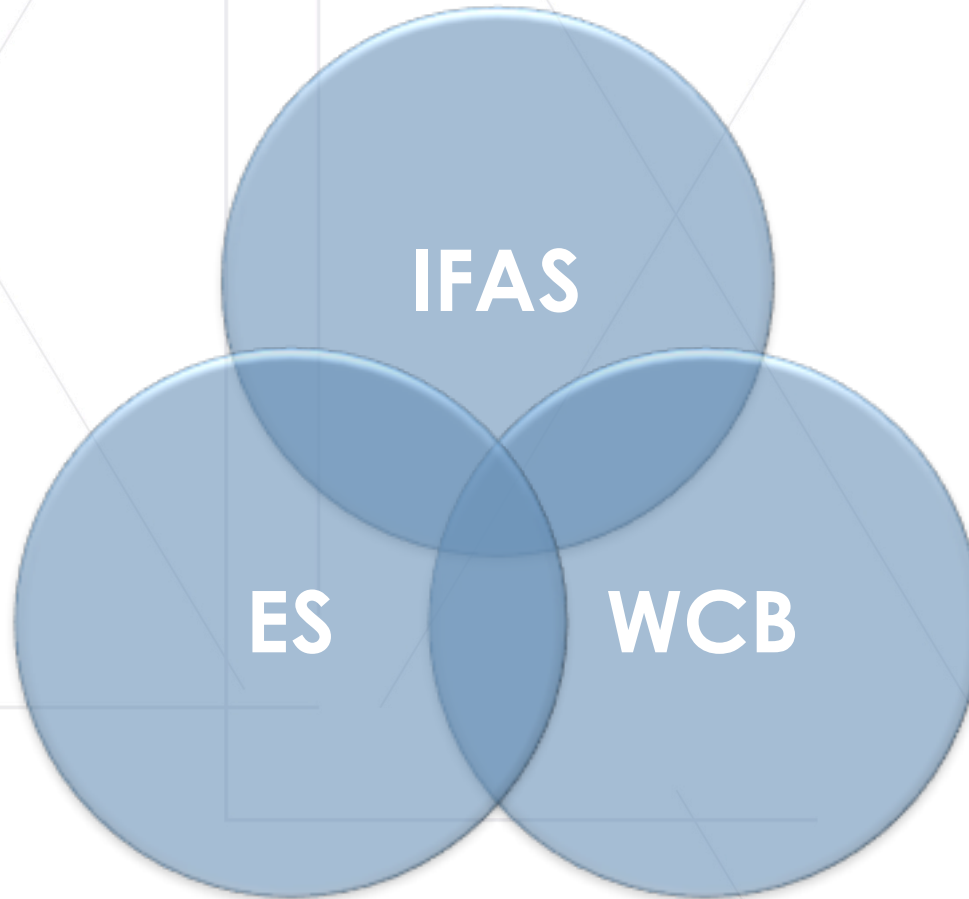
WHAT COULD BE

FRAGMENTATION ↓



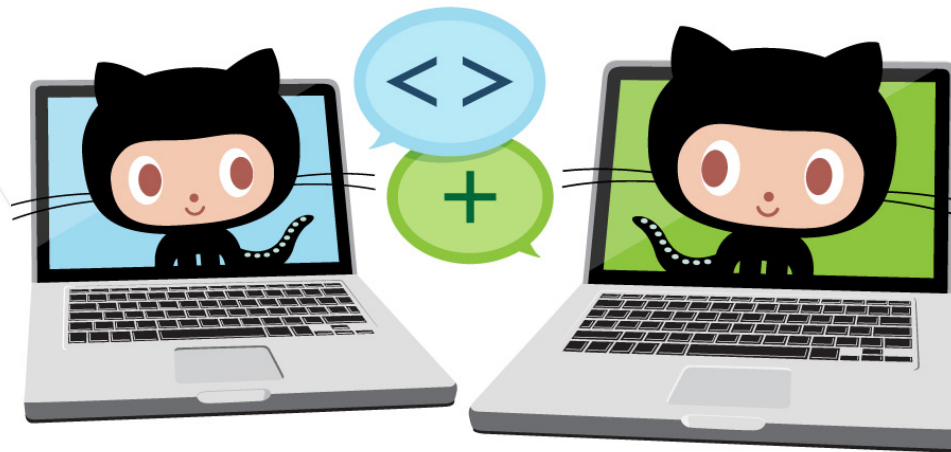
- solution

BARRIERS ↓



- solution

COLLABORATION ↑



SHARE / REUSE

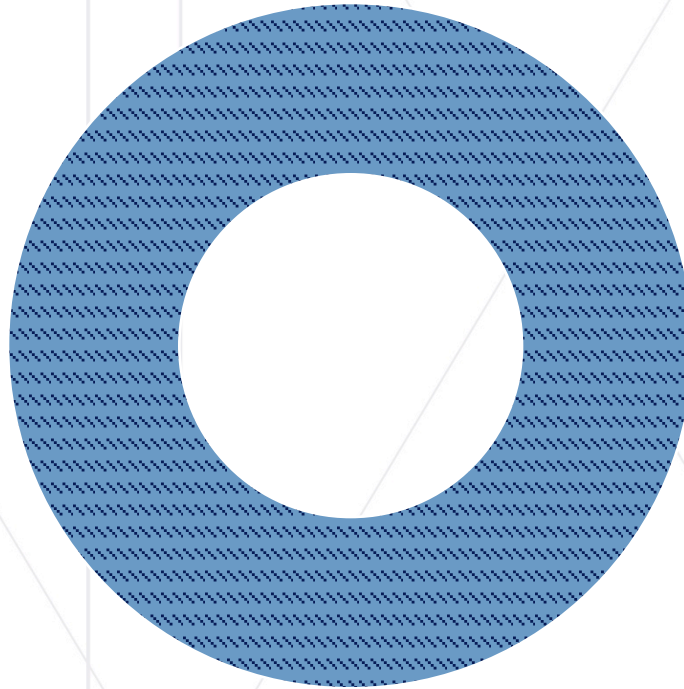
CONTRIBUTE

HELP

GET HELP

- solution

REINVENTING THE WHEEL ↓



Solve a problem. Share it.

- solution

RISK ↓

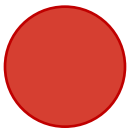
WORLD

UF

LEGEND

SERVICES

CODE



- solution

IN REVIEW

FRAGMENTATION ↓

BARRIERS ↓

REINVENTING THE WHEEL ↓

COLLABORATION ↑

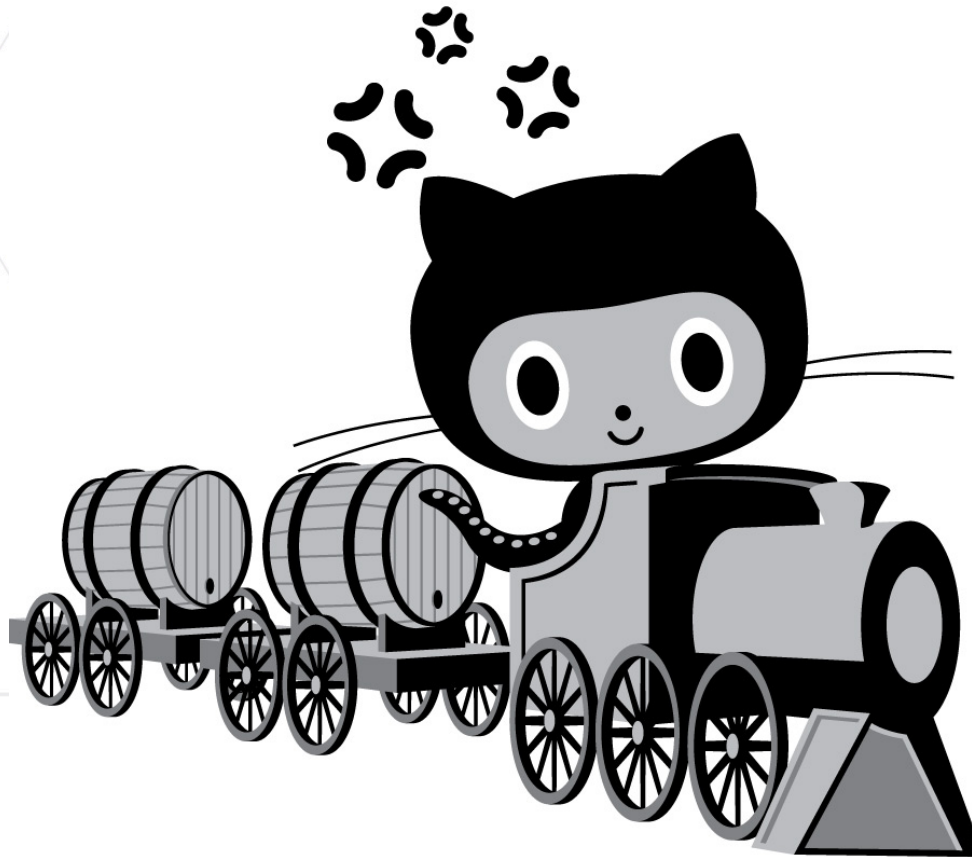
RISK ↓

TAKE HOME

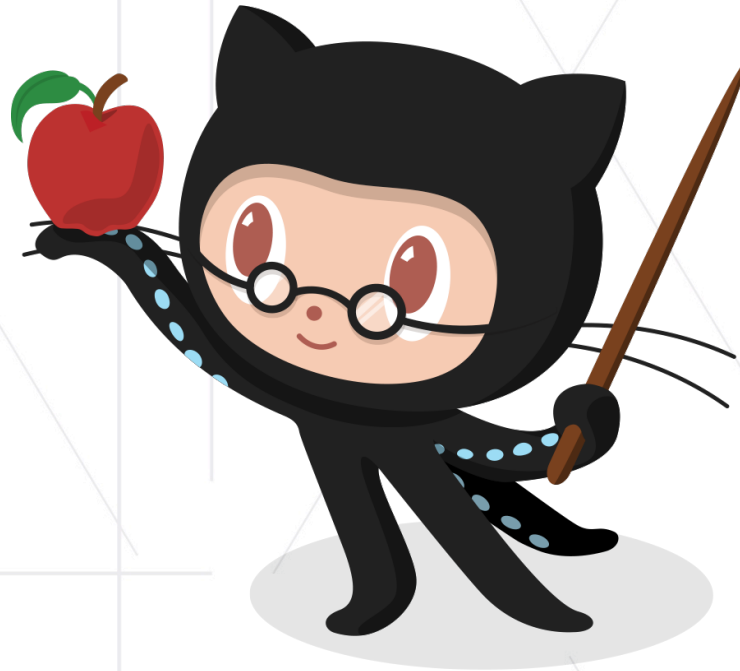


What could be outshines what is!

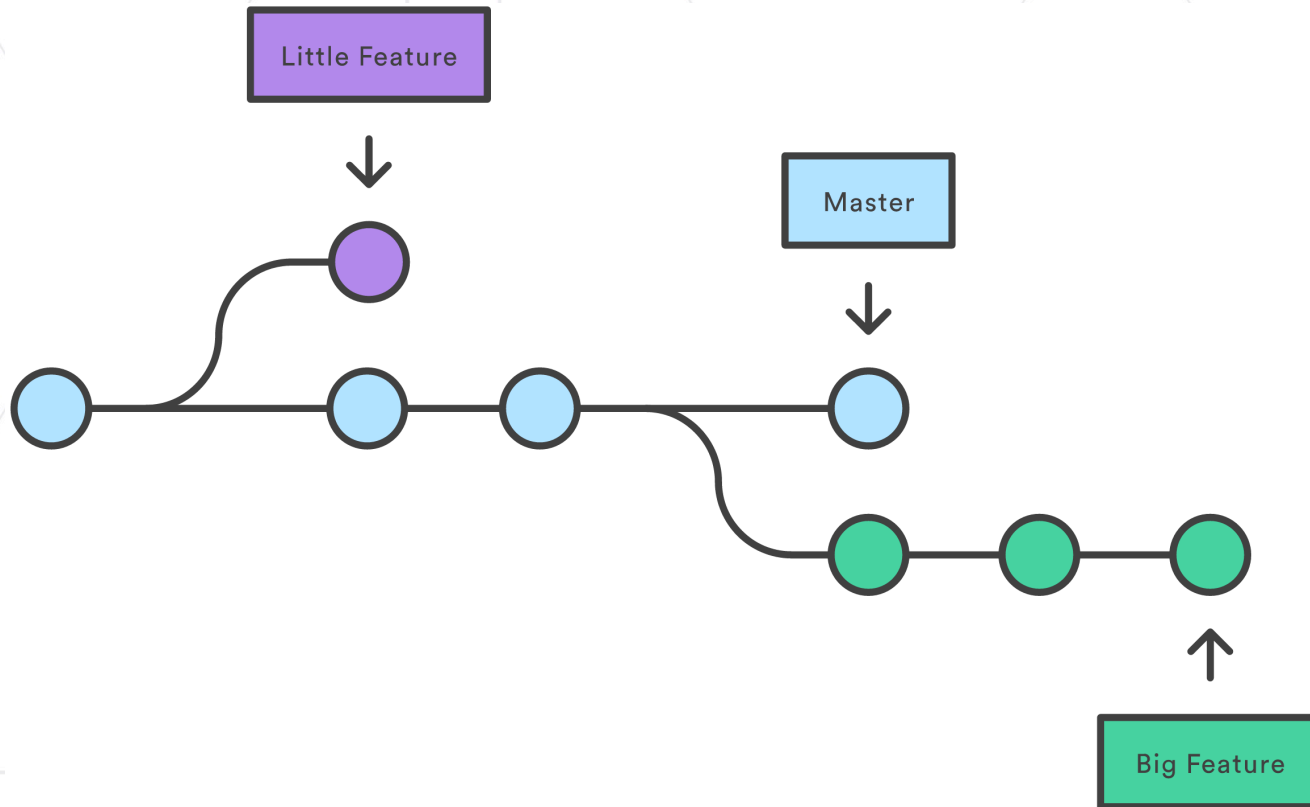
NOW LET'S GO ON A JOURNEY



TO LEARN ALL ABOUT GIT AND GITHUB

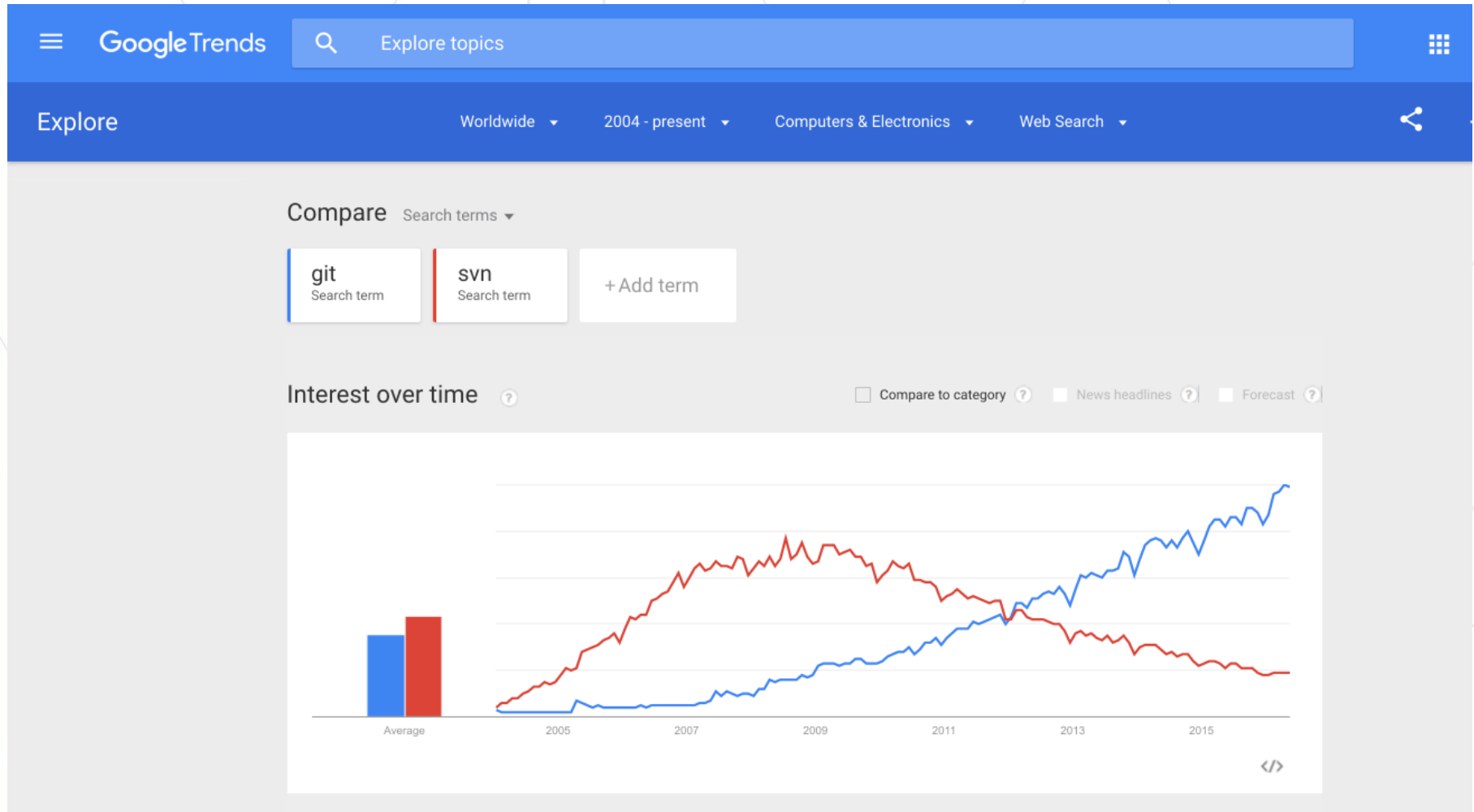


WHAT IS GIT?



Snapshots of code changes over time that can be undone or revisited

A SMART CHOICE



4 REASONS FOR GIT

01 **Multiple people**

03 **Time travel**

02 **Modularity**

04 **Work offline**

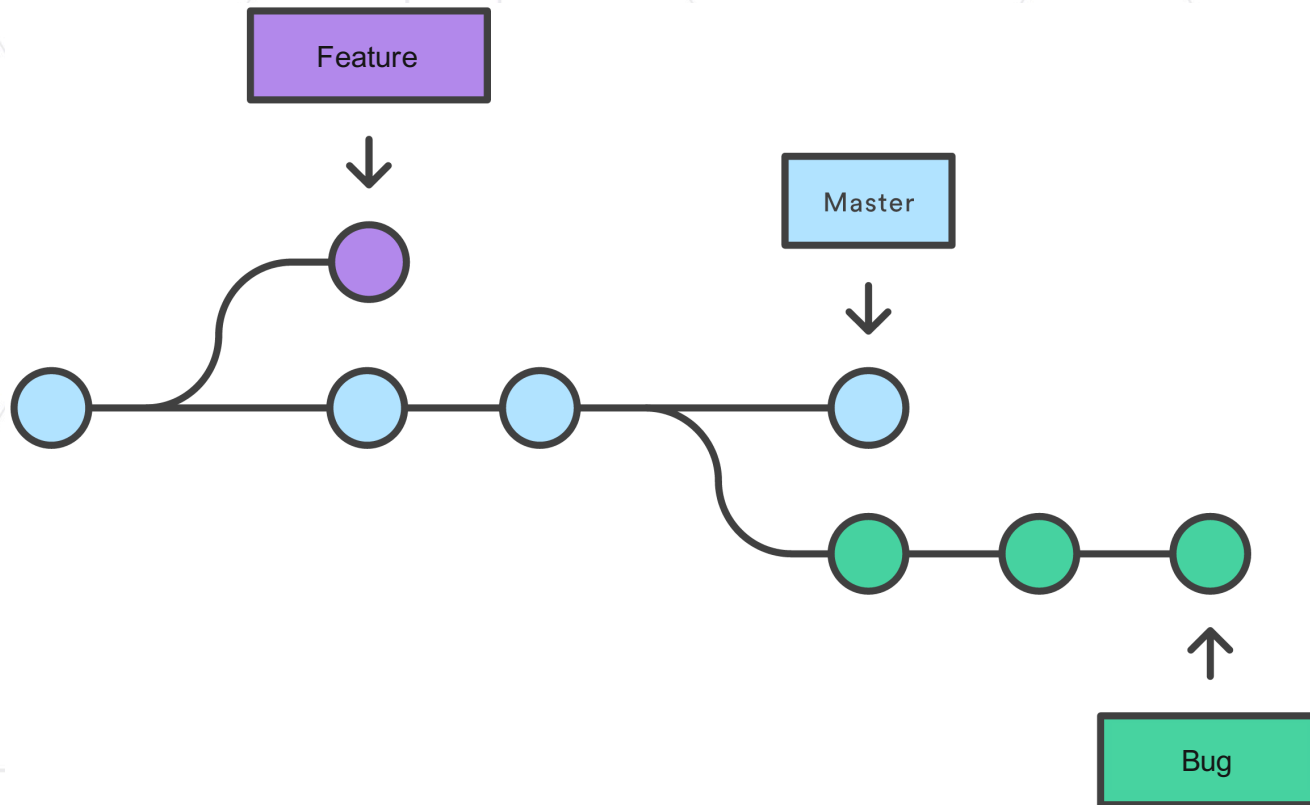
MULTIPLE PEOPLE



MULTIPLE PEOPLE

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

MODULARITY/BRANCHES



Master is always deployable...

MODULARITY/BRANCHES

- **Makes it less likely unfinished work will accidentally mix-in with production code**
- **Prevents us from having things like index1.html, index2.html, index3.html, etc.**
- **Leads to greater productivity and quality**

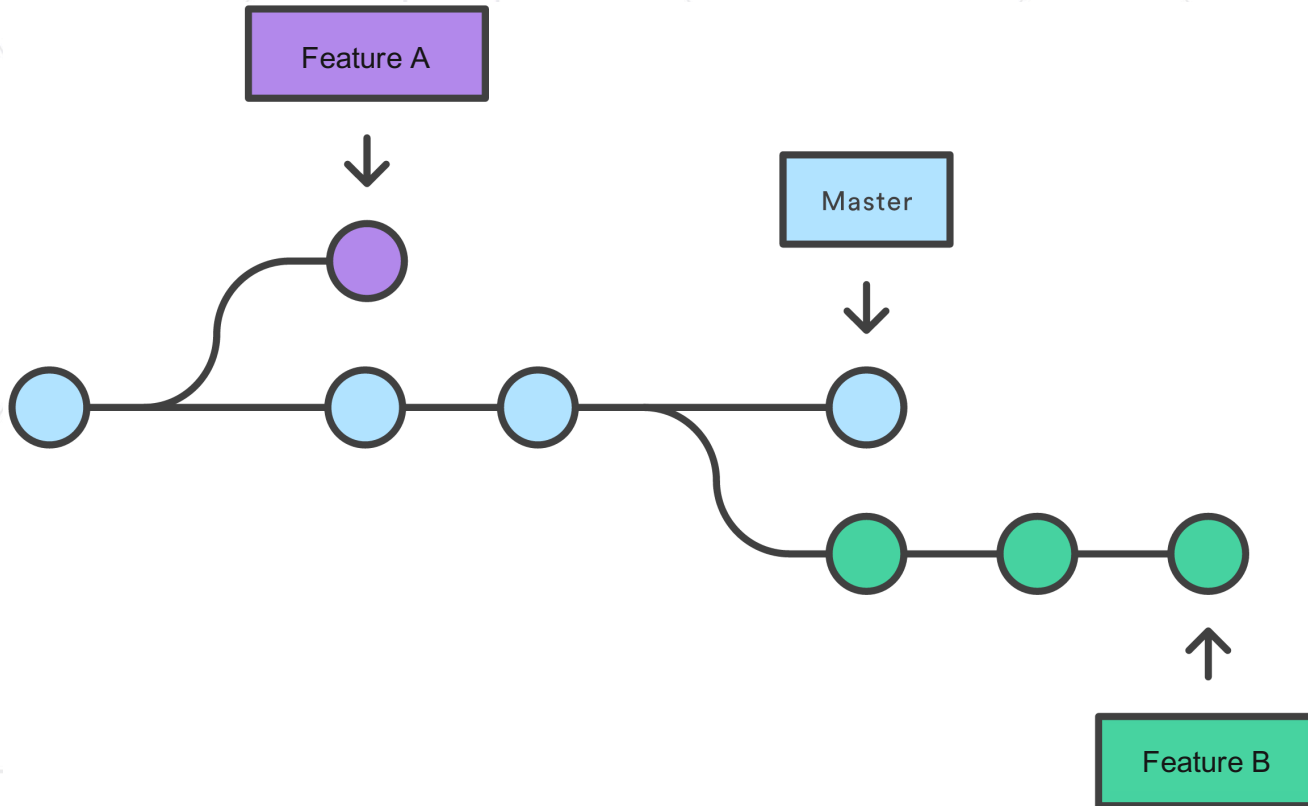
MODULARITY/BRANCHES

FEATURES

EXPERIMENTS

BUGS

FEATURES *MODULARITY*

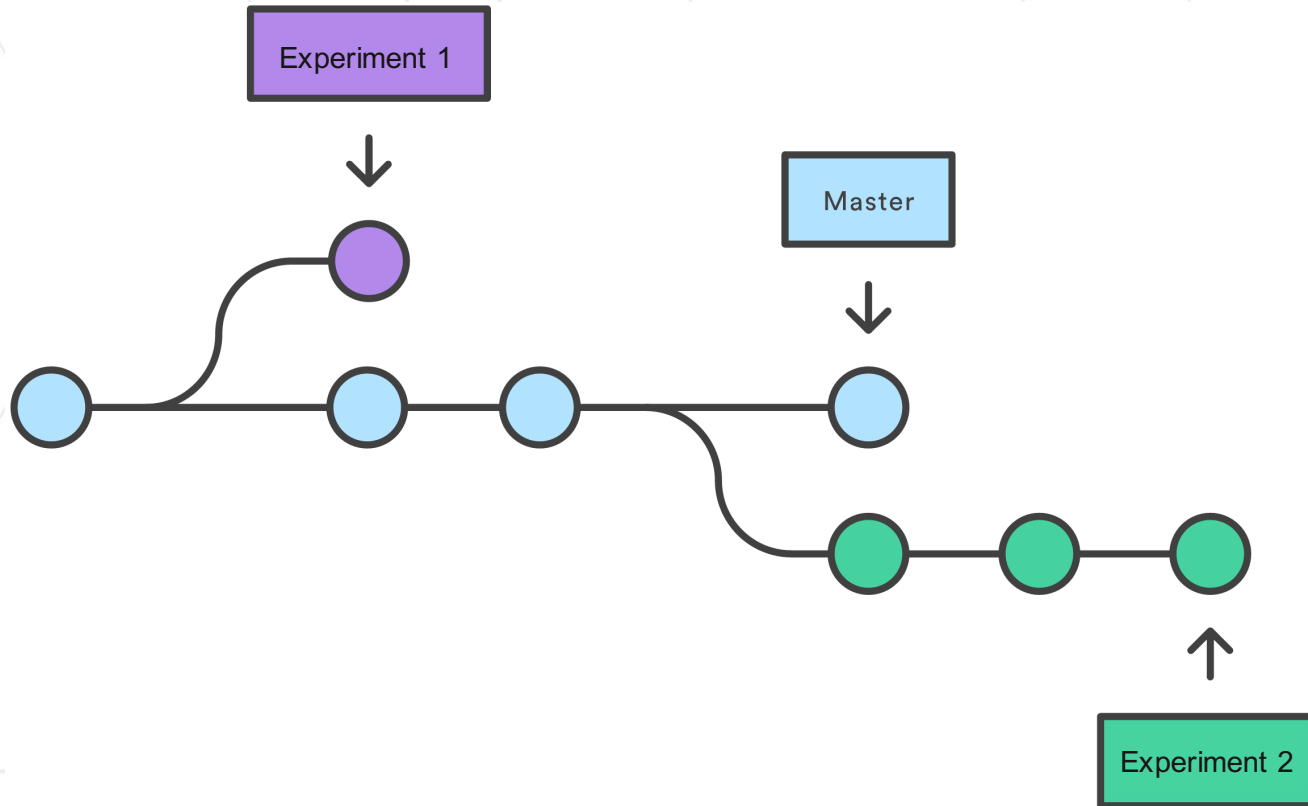


Master is always deployable...

FEATURES *MODULARITY*

- **Break problems into manageable features**
- **Easily switch between features**
- **Feature A is no longer desired; Delete it**
- **Feature B is impossible or a disaster; Delete it**

EXPERIMENTS *MODULARITY*

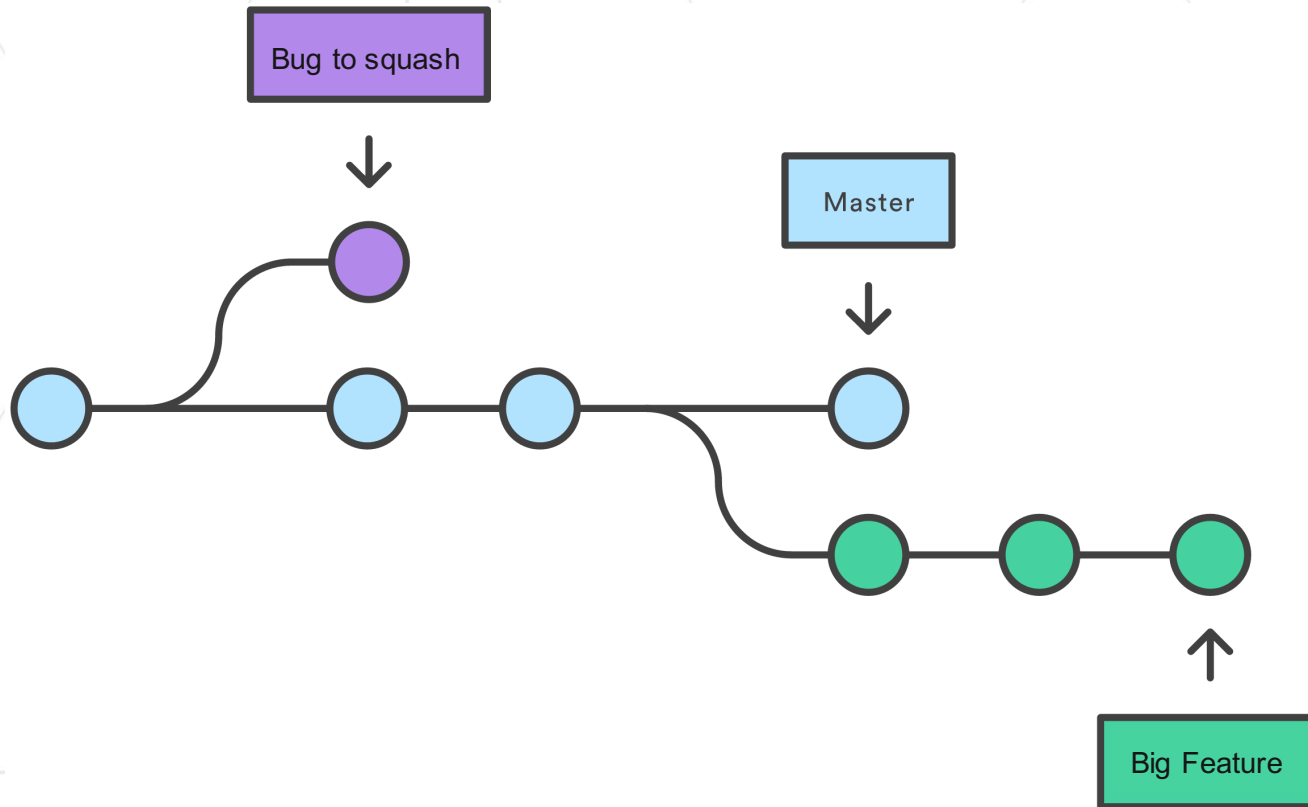


Master is always deployable...

EXPERIMENTS *MODULARITY*

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

BUGS *MODULARITY*



Master is always deployable...

BUGS *MODULARITY*

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

TIME TRAVEL



TIME TRAVEL


Update from gh-pages

View Branch

gh-pages ▾

page-load-animations


Sync



Merge pull request #40 from adriangritz/page-load-animations


1 month ago by adriangritz

2 +




Merge pull request #39 from willm...

1 month ago by adriangritz



Merge pull request #38 from adria...


1 month ago by adriangritz



Merge pull request #36 from adriangritz

1 month ago by adriangritz


2 +



Merge pull request #31 from adriangritz


1 month ago by adriangritz

2 +



Merge pull request #33 from adria...

1 month ago by adriangritz






Merge pull request #30 from bash...

1 month ago by adriangritz

Merge pull request #33 from adriangritz/page-load-animations

Added page load animations

 adriangritz  1 month ago  ▾

index.html

... -27,14 +27,14 @@

27 27 </head>

28 28

29 29 <body>

30 - <div class="hero-wrap">

30 + <div class="hero-wrap animated fadeIn">

31 31

32 32 <h1 class="m-t-25 display-4">GIT SMARTER</h1>

33 33 <div class="tagline">Resources for Git & Github!</div>

34 34 P2P SLIDES <i class="zmdi zmdi-slideshow zmdi-hc-1x"></i>

35 35 </div>

36 36 <div class="git-top-tier-resources">

37 - <div class="container">

37 + <div class="container animated fadeIn">

38 38 <div class="row">

39 39 <div class="col-md-3 text-xs-center">

40 40 <i class="zmdi zmdi-github zmdi-hc-5x c-dark-orange"></i>

... -108,7 +108,7 @@

108 108 </div>

109 109 <!-- /.git-tutorials-wrap -->

110 110 <div class="git-tutorials-wrap">

111 - <div class="container">

111 + <div class="container animated fadeIn">

112 112 <div class="row">

113 113 <div class="col-md-5">

114 114 <div class="item-wrap">

... -144,11 +144,11 @@

144 144 <div class="git-other-resources-wrap">

145 145 </div>

UF

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**

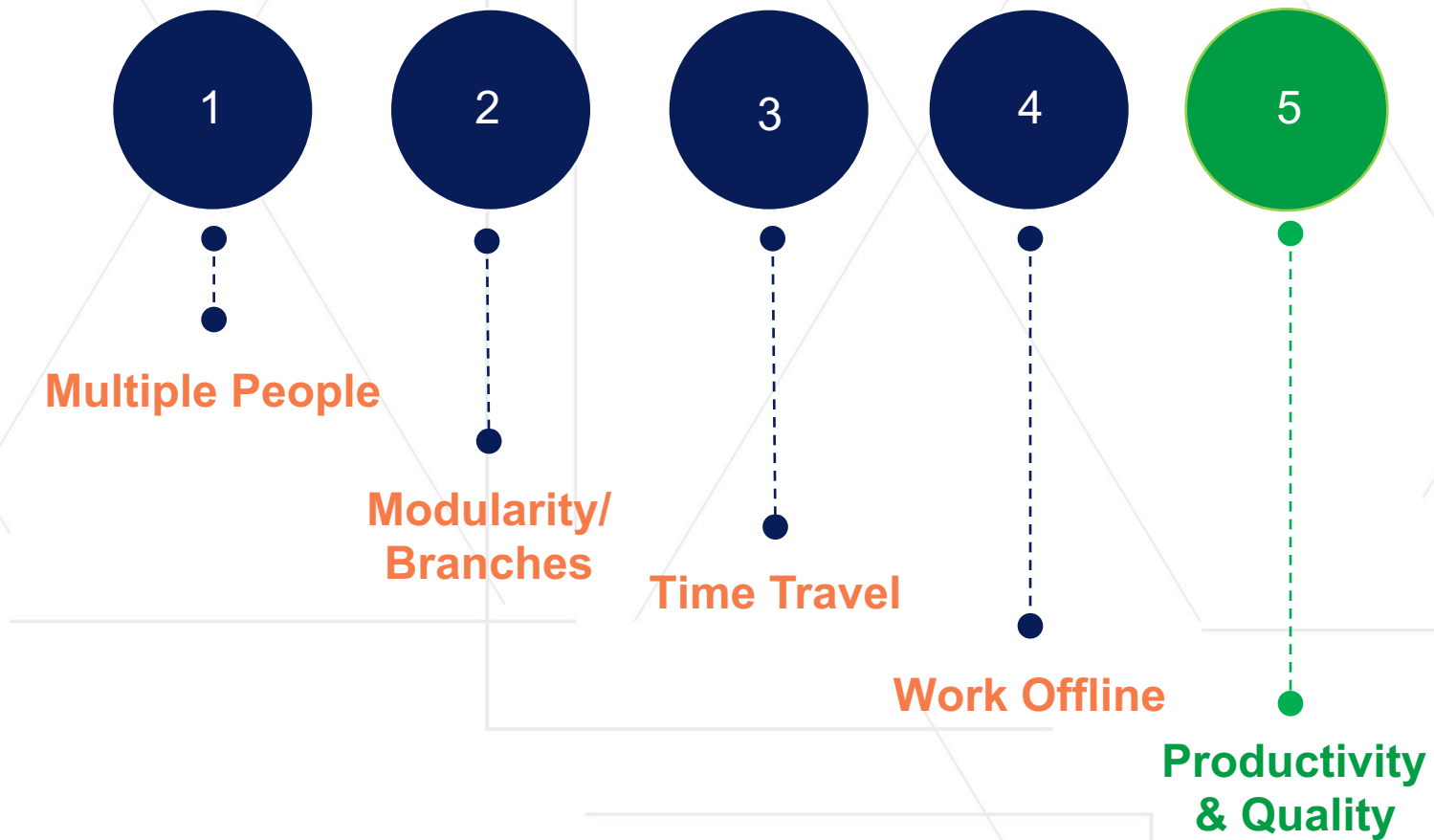
WORK OFFLINE



WORK OFFLINE

- **On a plane, train, or automobile**
- **Anywhere you can take a computer**
- **Since Git is distributed you always have a backup of the entire history of your project**

GIT IN REVIEW



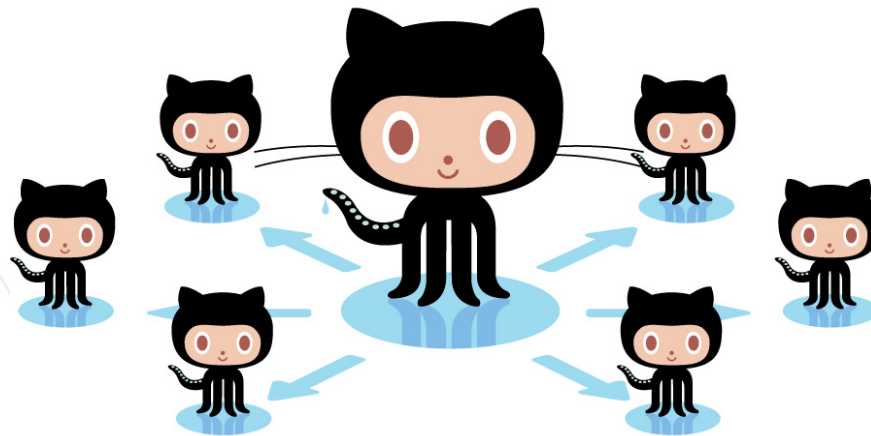
TAKE HOME

PRODUCTIVITY ↑



QUALITY ↑

WHAT IS GITHUB?



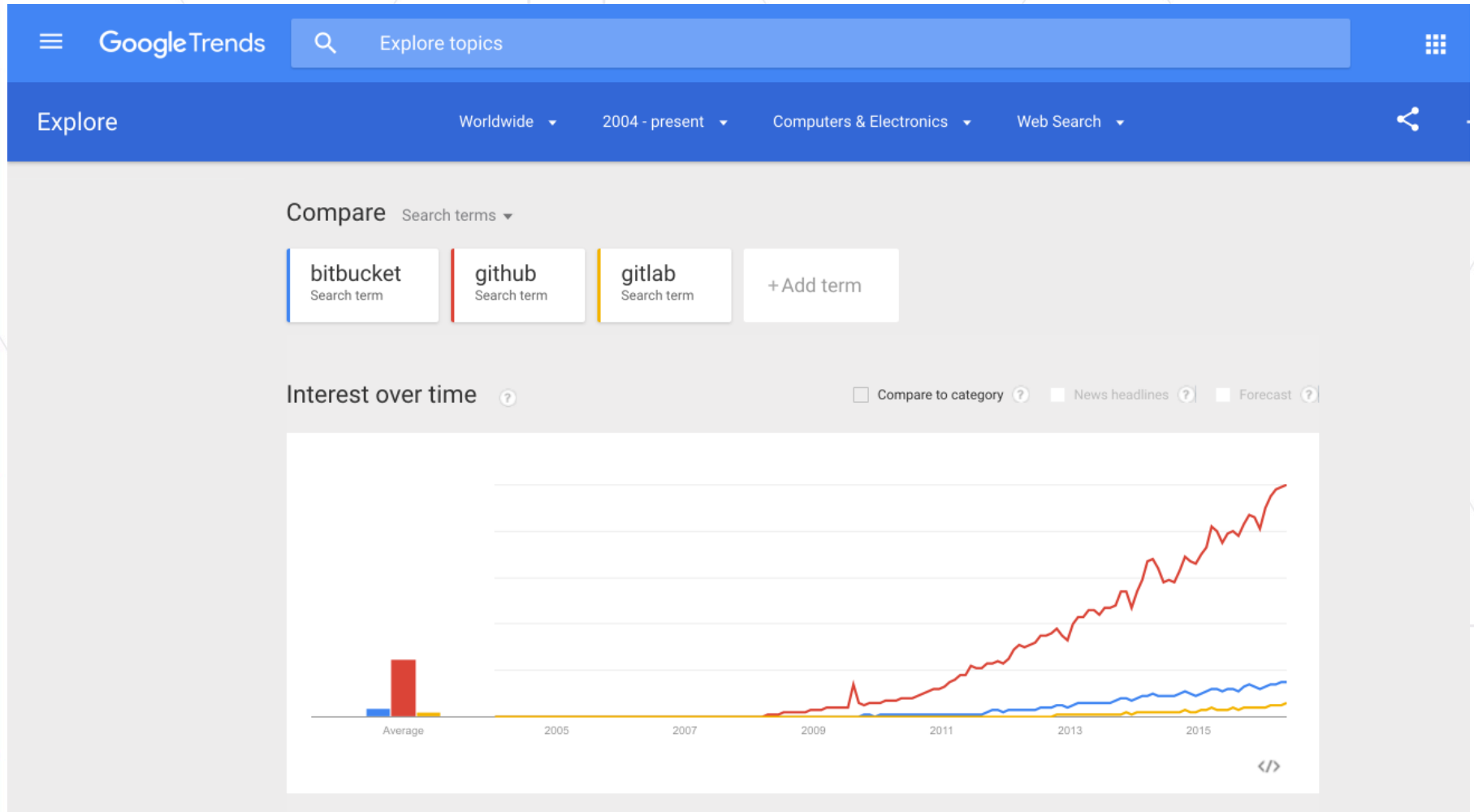
HOSTING (GIT SERVER)

COMMUNICATION (WEB INTERFACE)

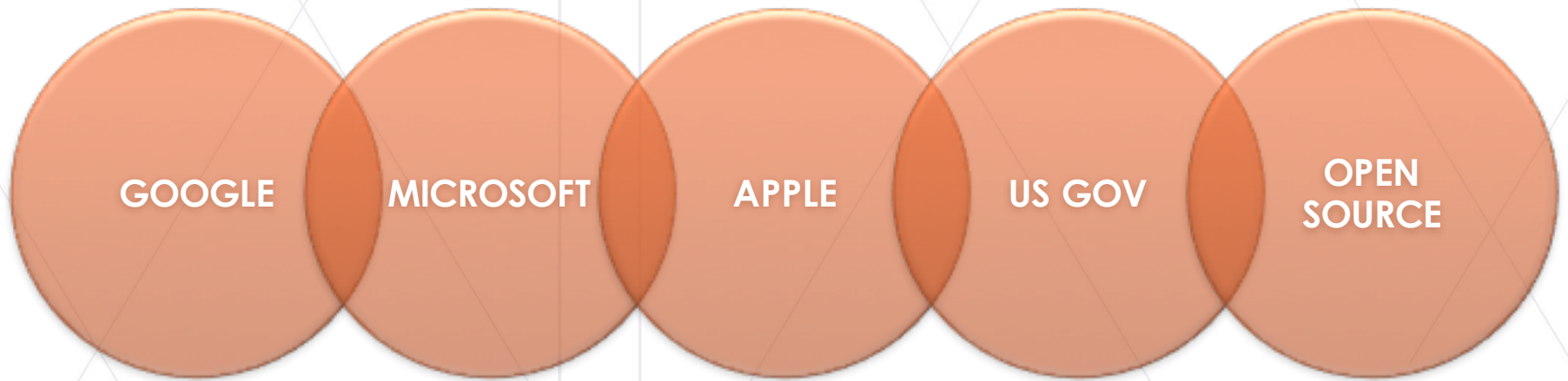
ACCESS (READ, WRITE, ADMIN)

COLLABORATION (SHARE, REUSE)

A SMART CHOICE



USED BY



ALSO USED BY

MIT

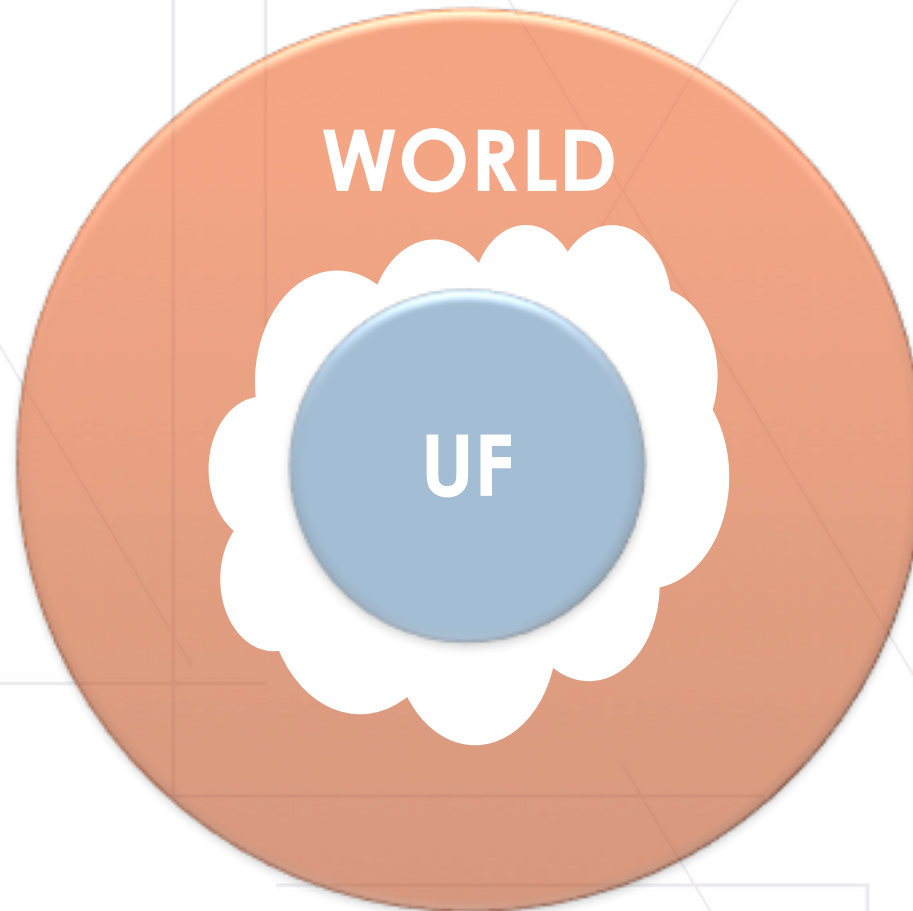
UNIVERSITY
OF
MINNESOTA

YALE

NCSU

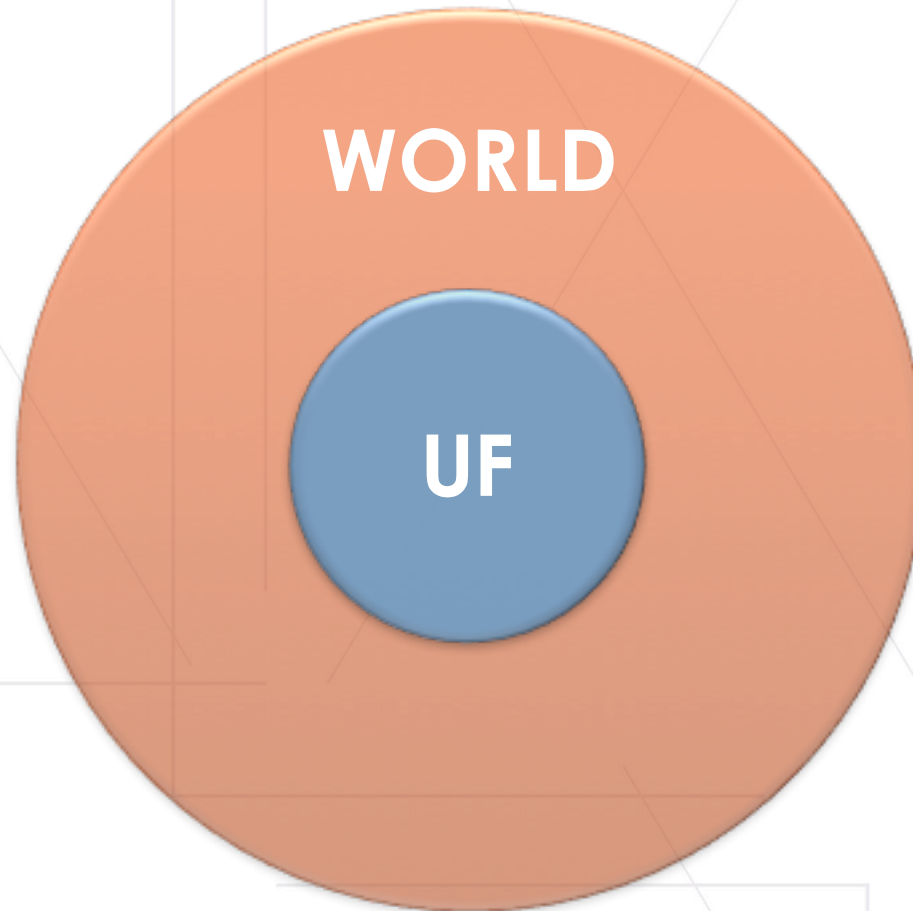
PRINCETON

GITHUB



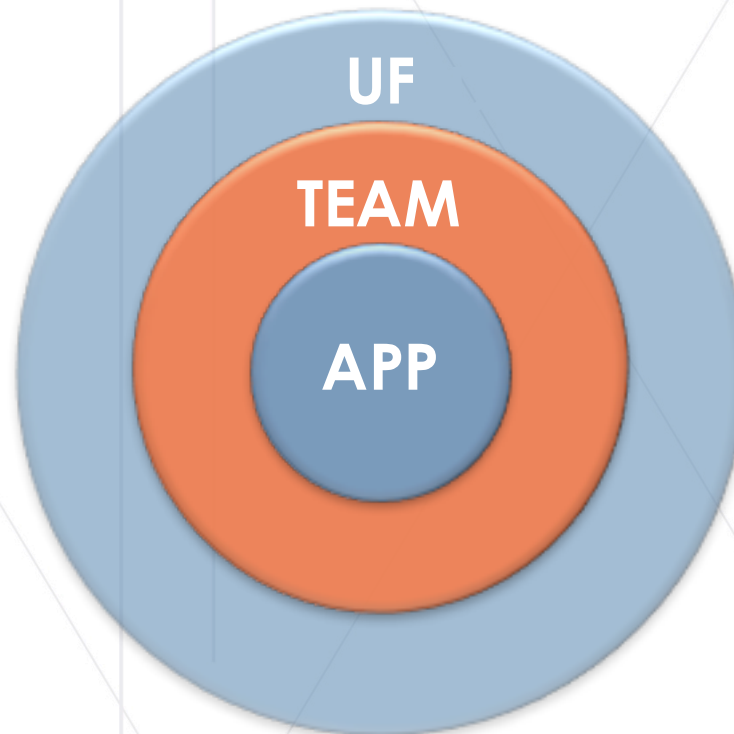
- in the cloud

GITHUB



- on premise

PUBLIC / PRIVATE ACCESS



READ, WRITE, ADMIN

10 REASONS FOR GITHUB

01

Fragmentation ↓

02

Git hosting

03

Access

04

Web interface

05

Adoption ↑

06

Productivity ↑

07

Quality ↑

08

Security ↑

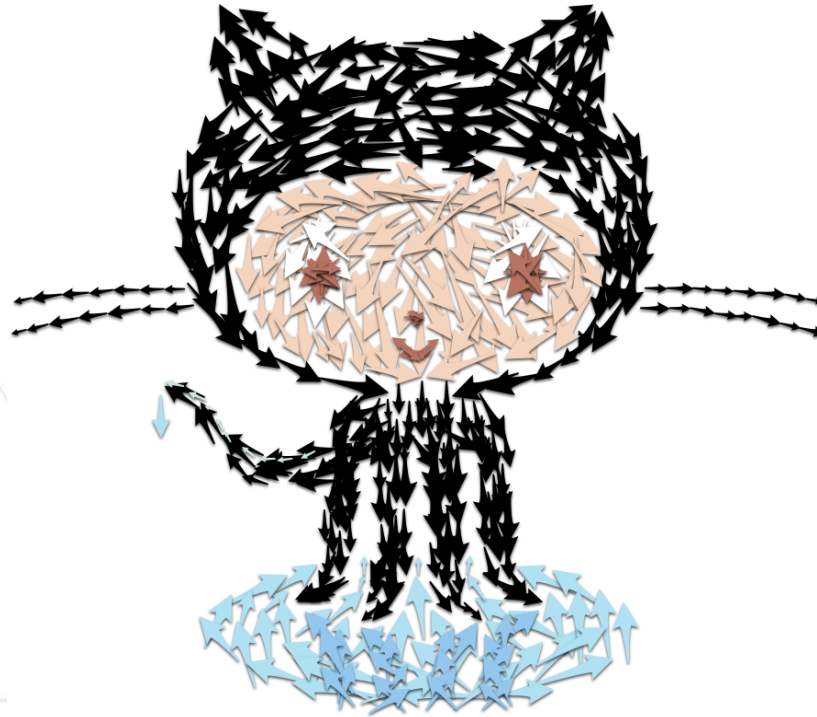
09

Communication ↑

10

Collaboration ↑

FRAGMENTATION



Decreases ↓

FRAGMENTATION ↓

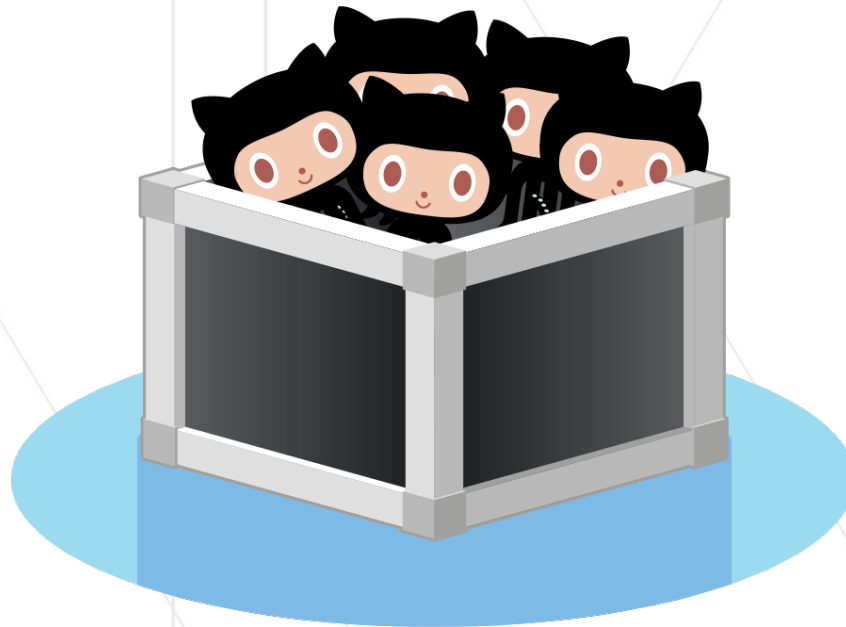
BARRIERS ↓

REINVENTING THE WHEEL ↓

COLLABORATION ↑

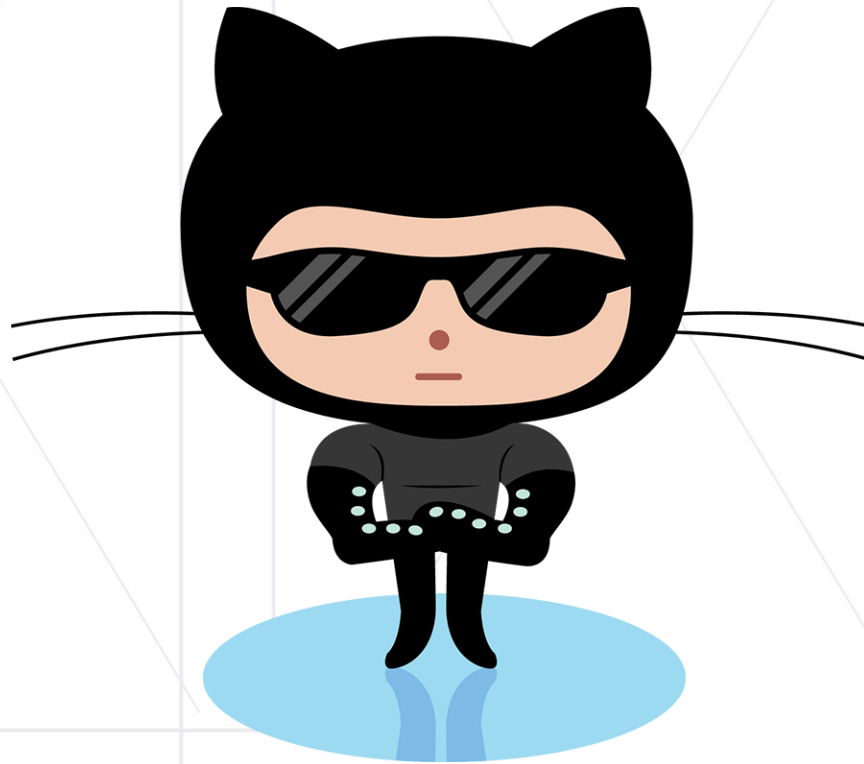
RISK ↓

GIT HOSTING



**Lowers barrier to adopting version control
skill wise**

ACCESS



Lowers barrier to collaboration
read, write, admin, url

WEB INTERFACE



WEB INTERFACE

- **View your code from any device/location**
- **Every line is a reference for a future need**
- **Total transparency**
- **See the history of everything**
- **Diffs in the browser**
- **Collaboration tools**
- **Communication tools**

PRODUCTIVITY



Increases ↑

PRODUCTIVITY

➤ GIT

- Multiple people (more hands on deck)
- Modularity
- Time travel
- Work offline

➤ WEB INTERFACE

- View code from any device/location
- Every line is a reference for a future need
- Collaboration tools
- Communication tools

QUALITY



Increases ↑

QUALITY

➤ GIT

- Multiple people (more eyes)
- Modularity
- Time travel

➤ WEB INTERFACE

- Code reviews can catch mistakes

ADOPTION *OF VERSION CONTROL*



Increases ↑

ADOPTION *OF VERSION CONTROL*

- **Hosting made easy**
- **Productivity and quality gains**
- **Web interface**
- **Access control made easy**
- **Support from UFIT**
- **A great opportunity since a lot of people are still not using version control**
- **Smart phone analogy**

SECURITY



Increases ↑

RISK *SECURITY*

WORLD

UF

LEGEND

SERVICES
CODE
PASSWORDS



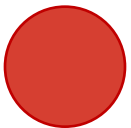
- problem

RISK *SECURITY*

WORLD

UF

LEGEND
SERVERS
CODE



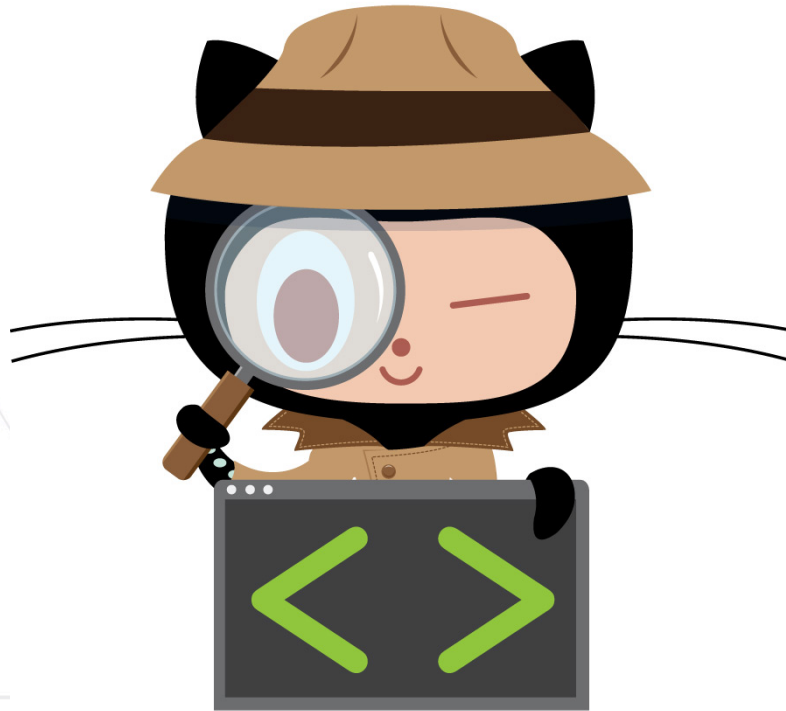
- solution

UF SERVERS *SECURITY*



Private IP's and other security magic

AUDITABLE *SECURITY*



File permissions, passwords, known vulnerabilities

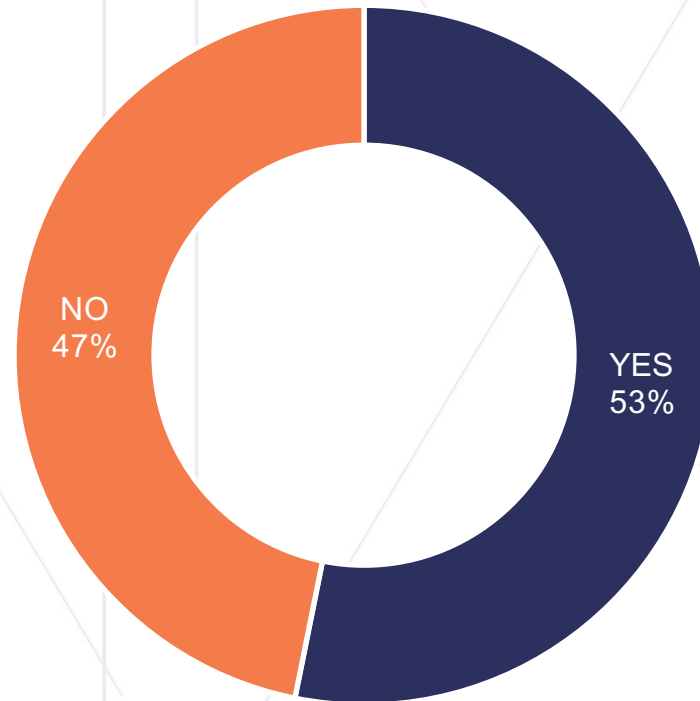
SHIB, AD, 2FA *SECURITY*



Shibboleth®

FEAR OF CLOUD HOSTING

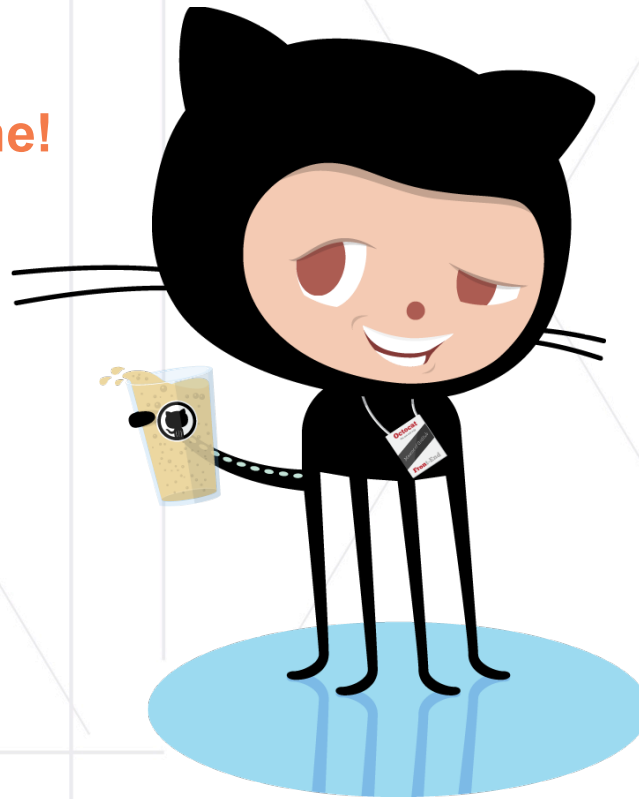
SECURITY



Kills collaboration opportunities

NON SYS ADMINS *SECURITY*

Frontend awesome!



Backend noob!

**Installing, updating, and patching LAMP and
Windows servers for Git & SVN hosting**

COMMUNICATION



Increases ↑

COMMUNICATION

ISSUES & LABELS

CODE REVIEW

MILESTONES

COMMENT & DISCUSS

MARKDOWN

WIKI

All project communication in one place

COMMUNICATION

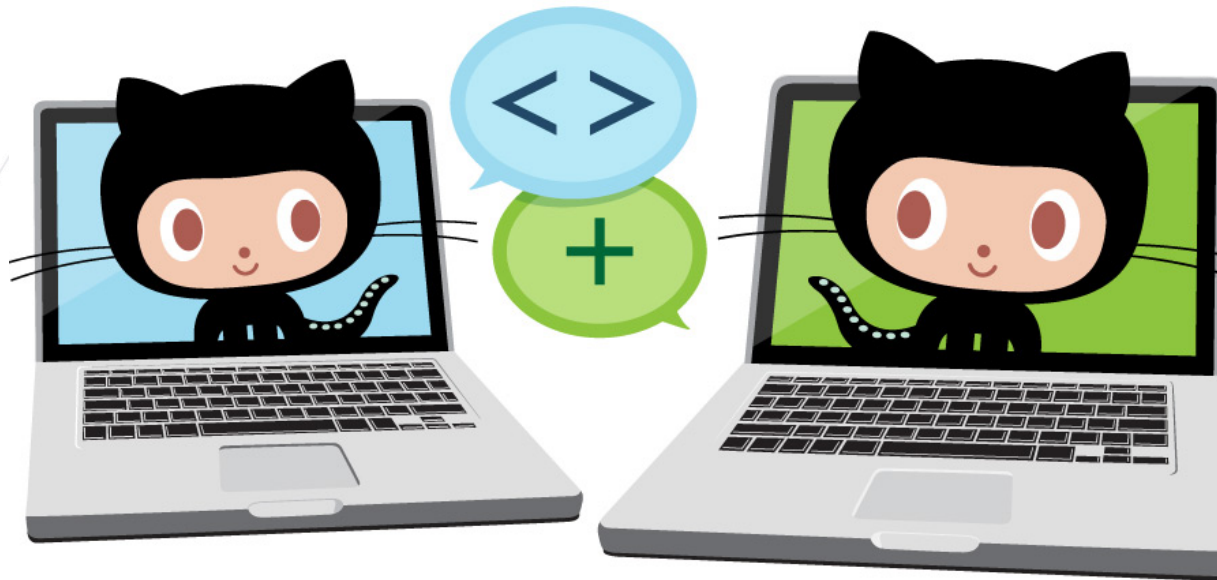
EIS HOSTING DOCUMENTATION

SHIBBOLETH DOCUMENTATION

FAQ's

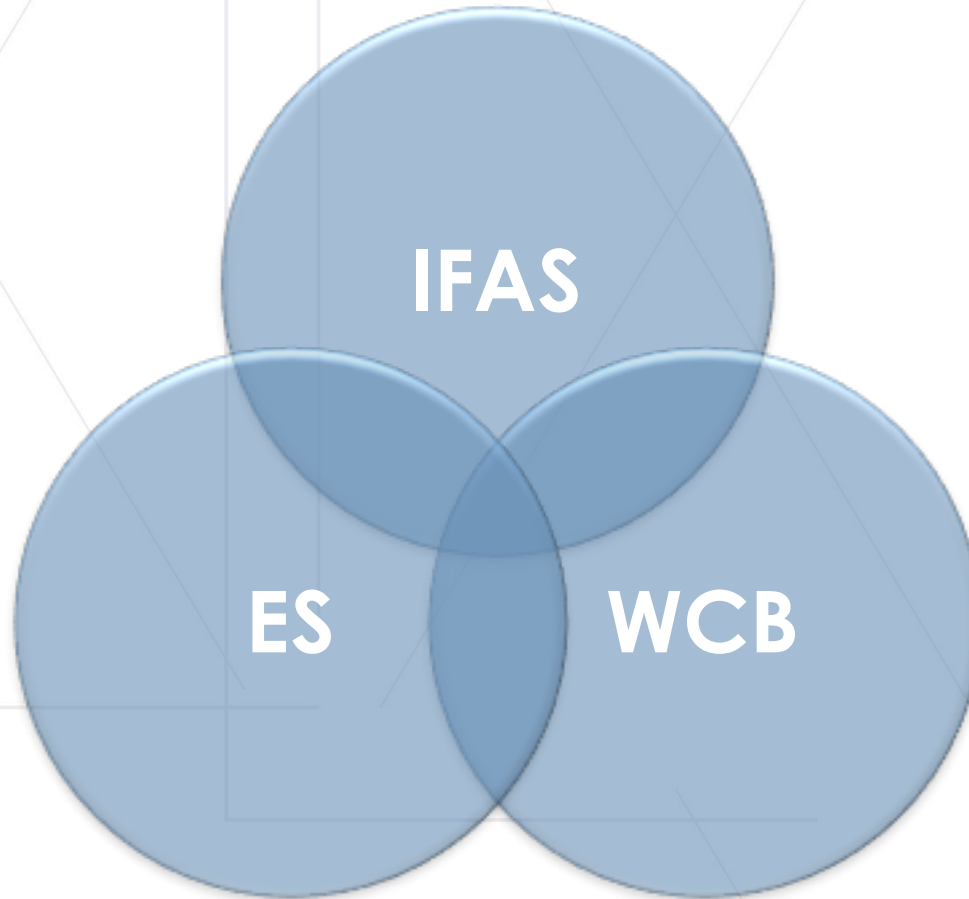
Can be crowd sourced

COLLABORATION



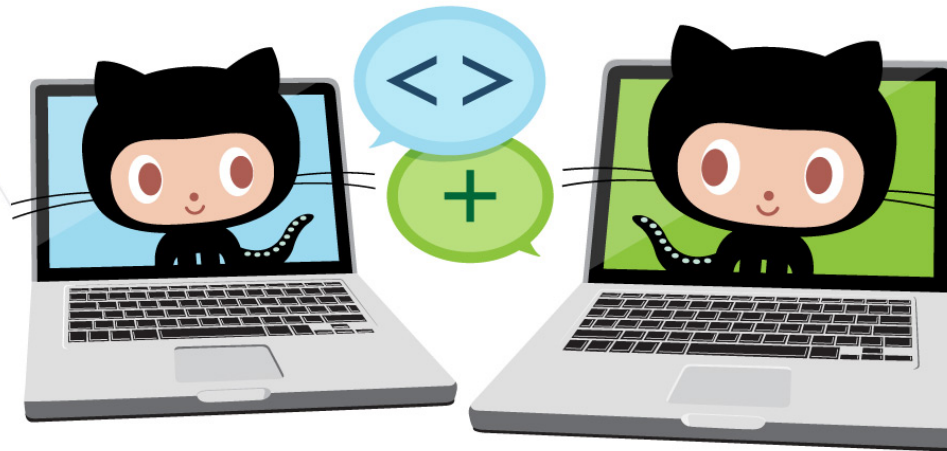
Increases ↑

BARRIERS ↓



- solution

COLLABORATION



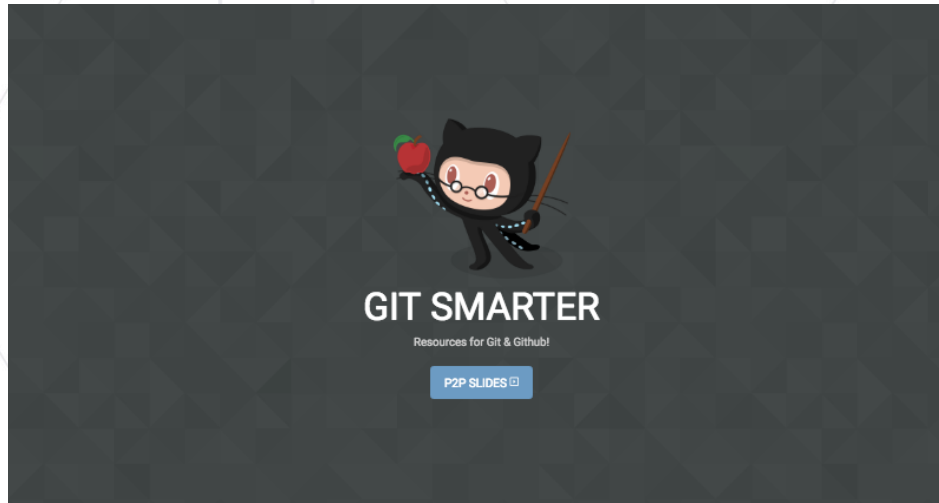
SHARE / REUSE

CONTRIBUTE

HELP

GET HELP

COLLABORATION EXAMPLE



Github Guides



Getting Git



Pro Git



Git Branching



GitHub

This cheat sheet summarizes commonly used Git command line instructions for quick reference.



Git Tower

Our Git cheat sheet saves you from learning all the commands by heart. Plus best practices.



Atlassian

A quick reference for the most frequently used Git commands.

GitHub

GIT CHEAT SHEET

Git is the open source distributed version control system that facilitates GitHub activities on your laptop or desktop. This cheat sheet summarizes commonly used Git command line instructions for quick reference.

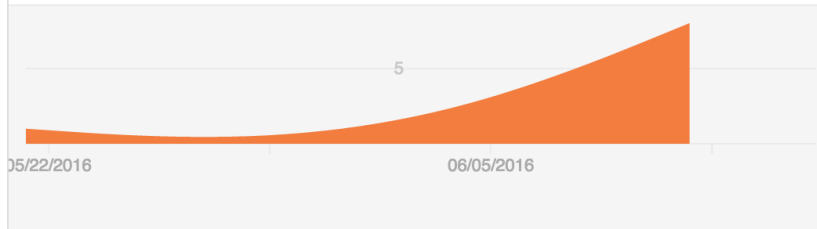
CONTRIBUTORS



adriangritz

11 commits / 365 ++ / 53 --

#1



adifranco

1 commit / 3 ++ / 3 --

#2



basharoot

1 commit / 5 ++ / 5 --

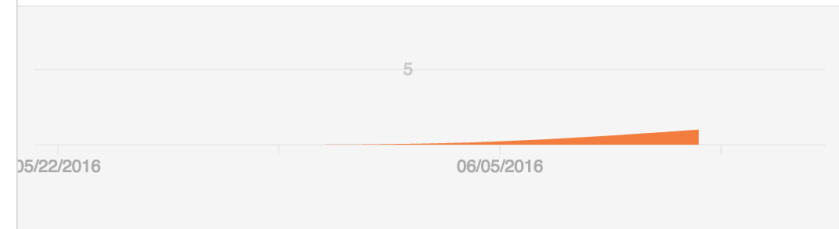
#3



mdgritz

1 commit / 6 ++ / 6 --

#4



priscillamc

1 commit / 9 ++ / 0 --

#5



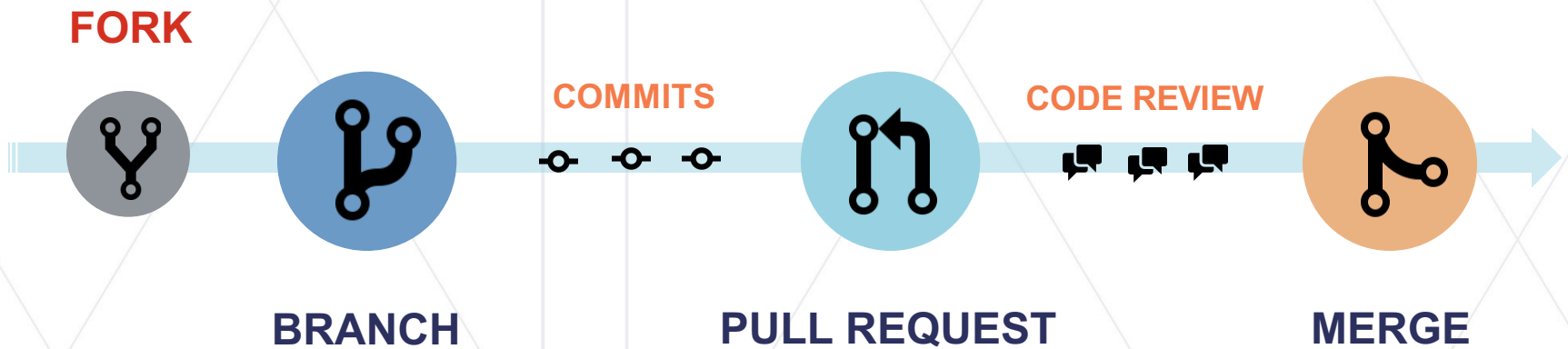
jodibean

1 commit / 4 ++ / 4 --

#6



COLLABORATION



GitHub Flow / Feature Branch Workflow

FORK *GITHUB FEATURE*

Contribute

Feature



Bug

Head start

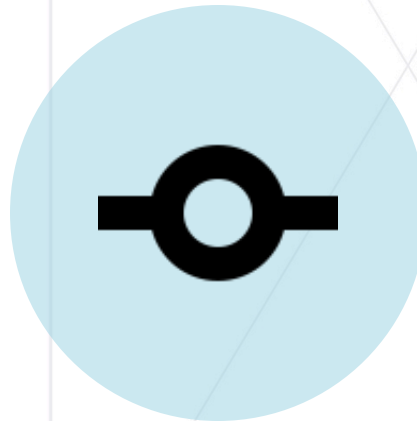
**Copy a project you don't have access to
into your account**

BRANCH *GIT FEATURE*



A parallel copy of project within your own account to work on a feature, bug, etc.

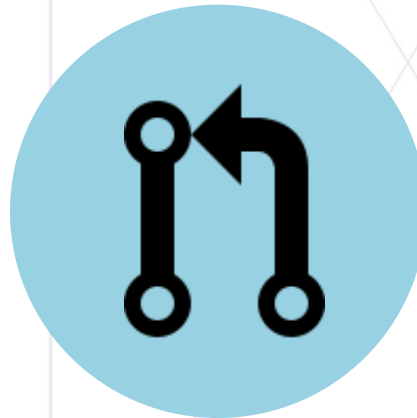
COMMIT *GIT FEATURE*



A batch of code changes with a message

PULL REQUEST

GITHUB FEATURE



A notification to original owner that you completed a feature or fixed a bug

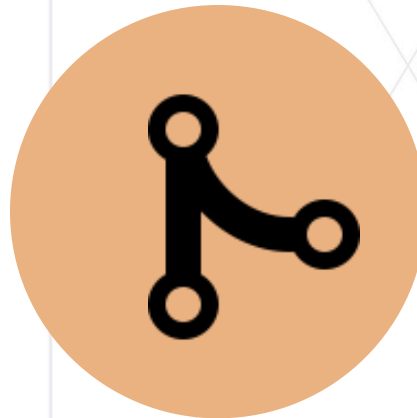
CODE REVIEW

GITHUB FEATURE



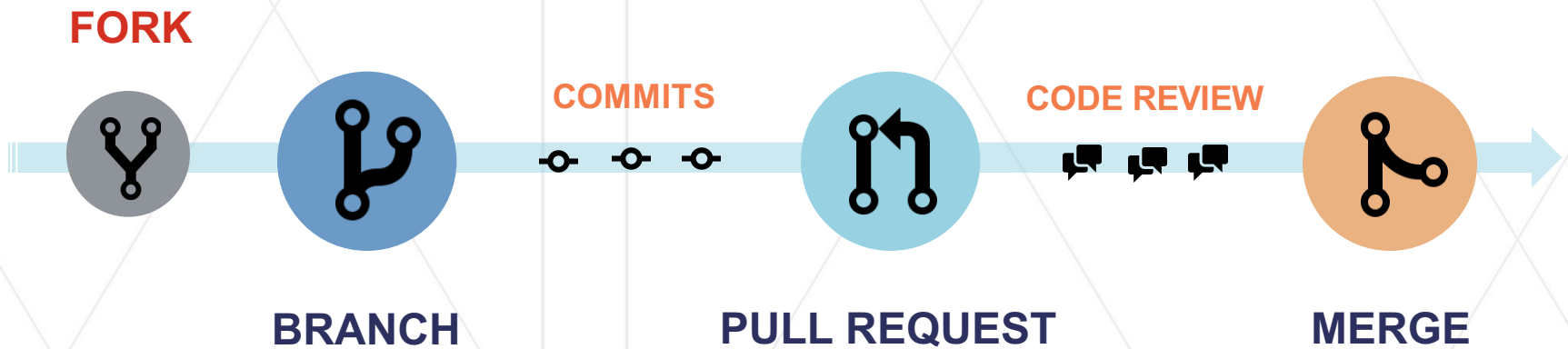
Original owner reviews feature or bug fix

MERGE *GIT FEATURE*



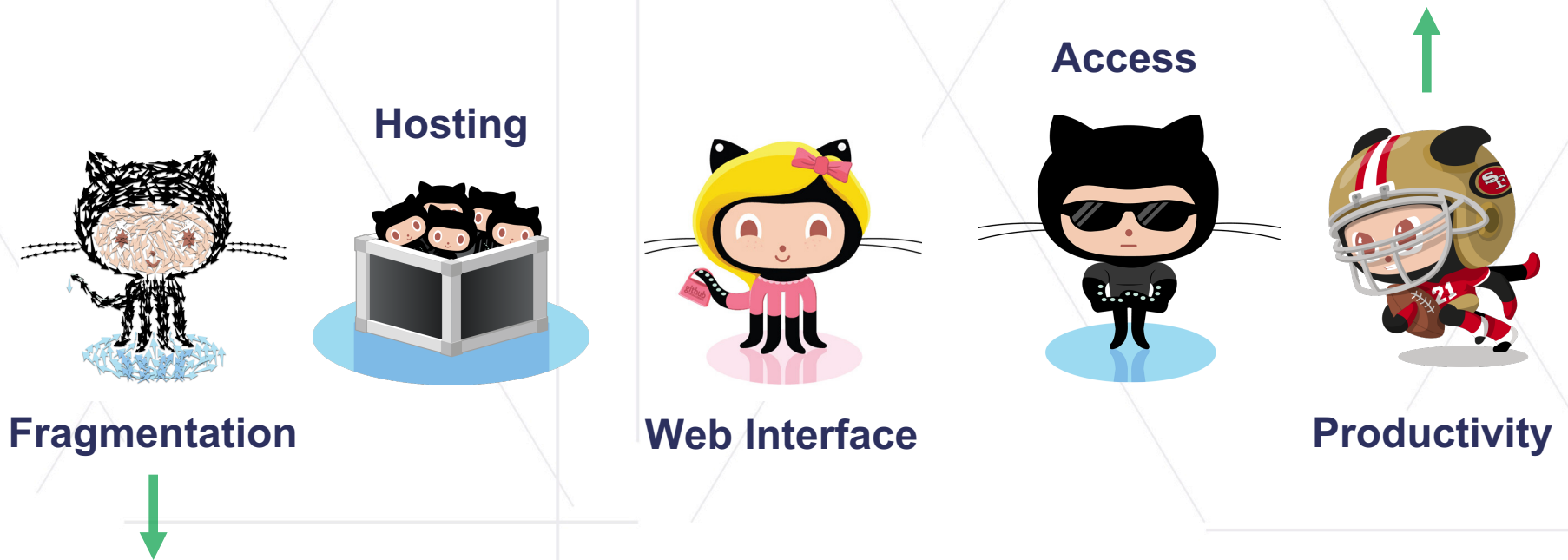
**Original owner merges feature or bug fix
into original project**

COLLABORATION

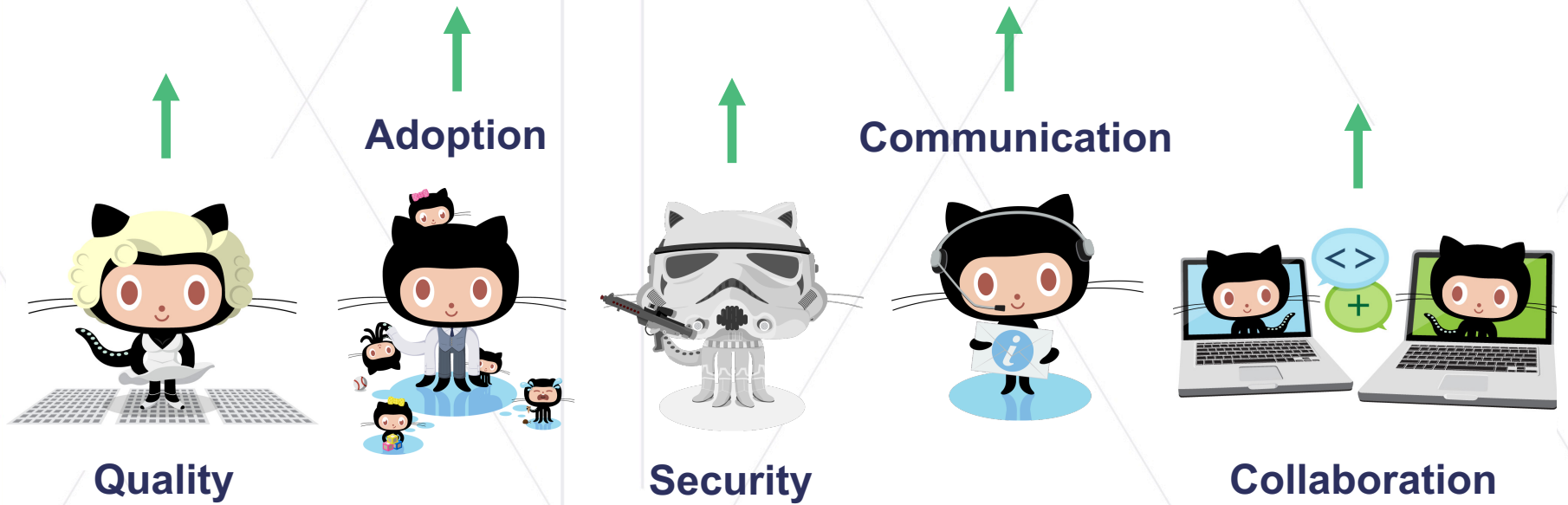


GitHub Flow / Feature Branch Workflow

THE VALUE *IN REVIEW*



THE VALUE *IN REVIEW*



TAKE HOME



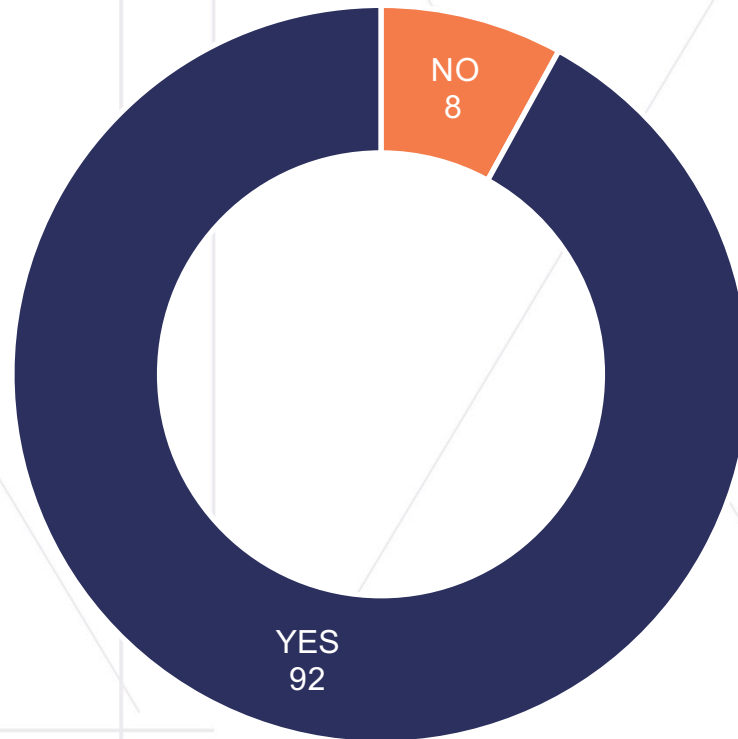
Github provides a lot of value!

PEOPLE CARE



This is important to many people!

GITHUB YES PLEASE



WCM survey had 94 replies
Peer to peer had 10

OPINIONS FROM PEOPLE WHO CARE

01

I like this.

04

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

02

Love the potential networking and sharing of creativity.

05

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

03

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

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.

A LOT OF THANKS



A LOT OF THANKS



Thanks for taking this initiative. I support this effort.



I really want the push for Github for the Enterprise to be successful.



Thank you again for taking the time and effort to make this process more visible.



Thank you!

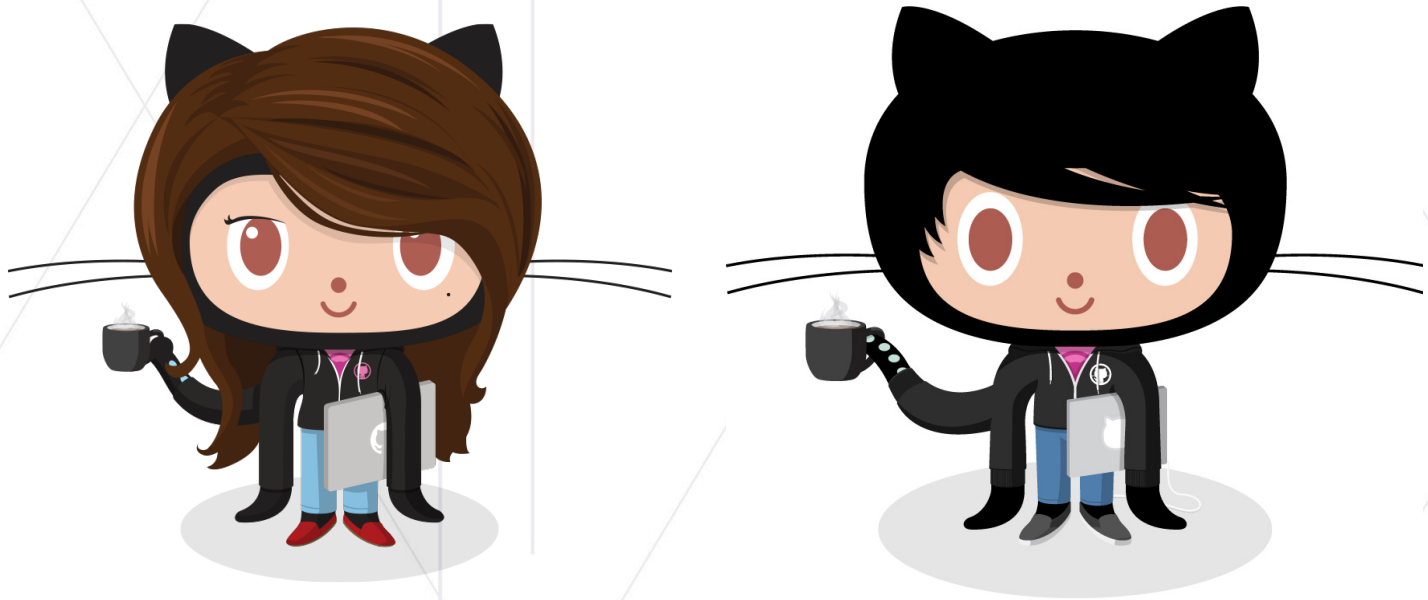


Great job you have my appreciation!



Thanks for putting this together!

PEERS AROUND CAMPUS



I hope it gets funded! It would be awesome!
Thank you!

IF THEY WERE HERE



**They might say pretty please with a
cherry on top!**

TAKE HOME



People care!

LETS IMAGINE A FUTURE



Where we put it all together!

- put your imagination glasses on

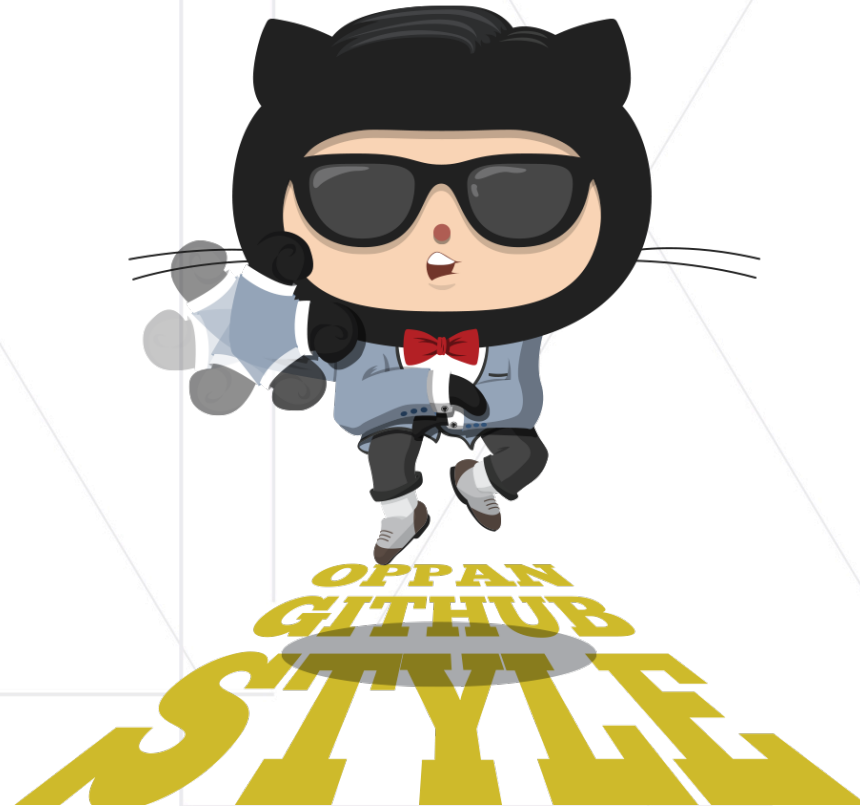
GITHUB IS APPROVED



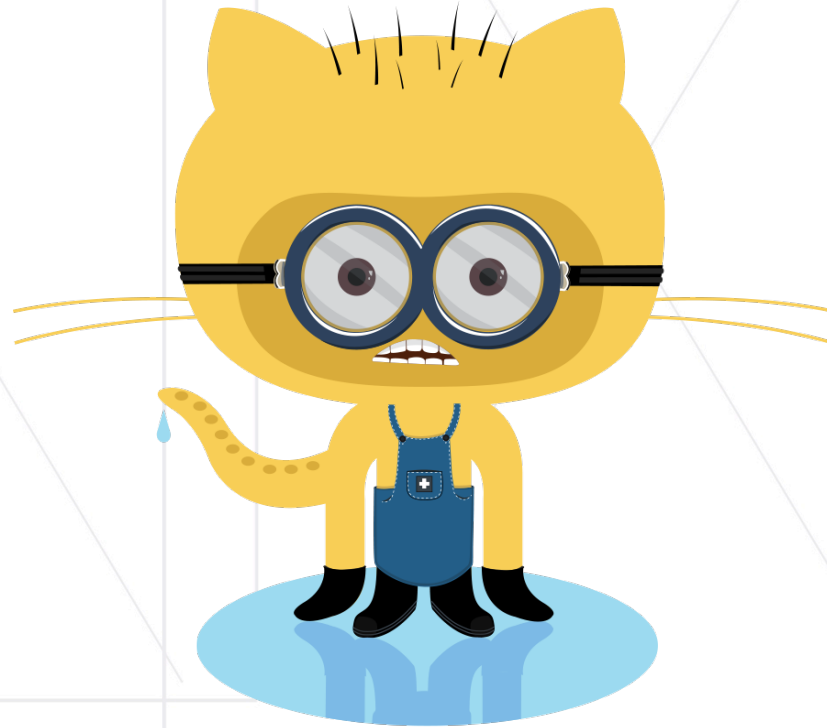
A SYMBOL FOR COLLABORATION



EVERYONE CELEBRATES



1 ODD SIDE EFFECT



What could it be?

DEVELOPER HAPPINESS



Increases ↑

DEVELOPER HAPPINESS

31% MORE PRODUCTIVE

3x MORE CREATIVE

- Harvard Business Review

GOODBYE FRAGMENTATION

GIT

SVN

OTHER

NOTHING

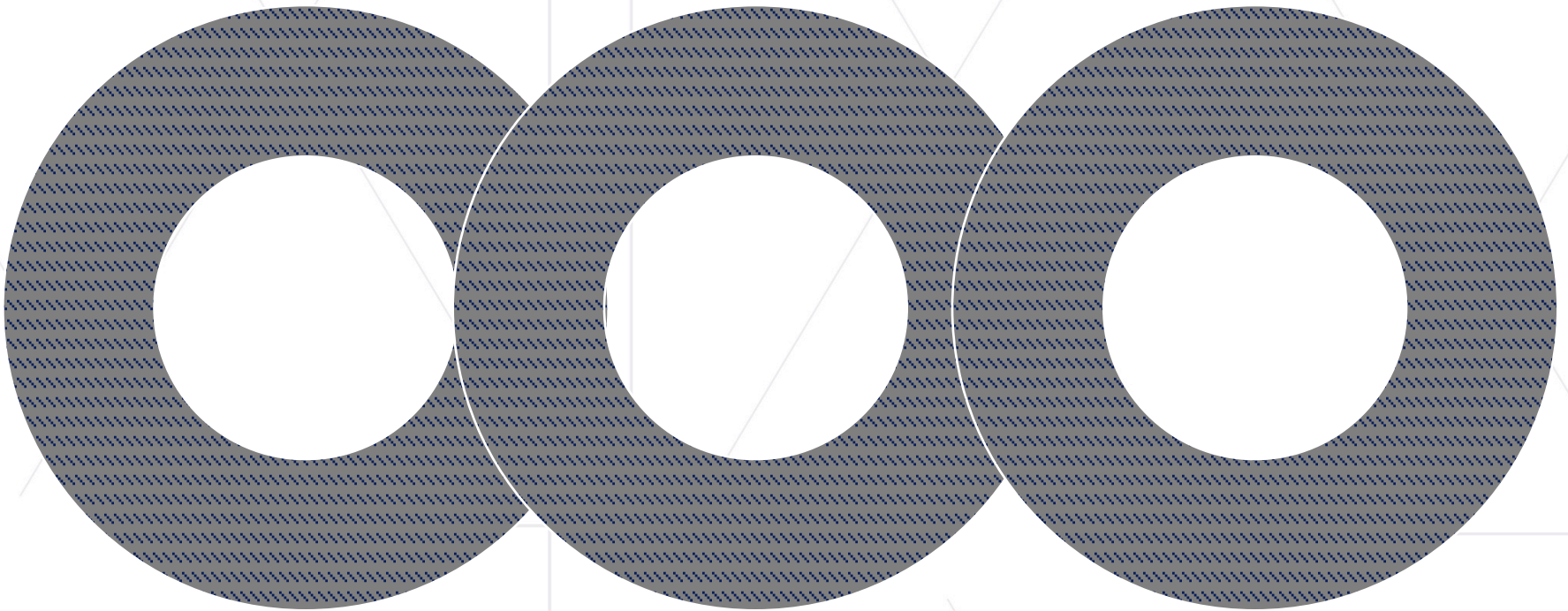
GITHUB

BITBUCKET

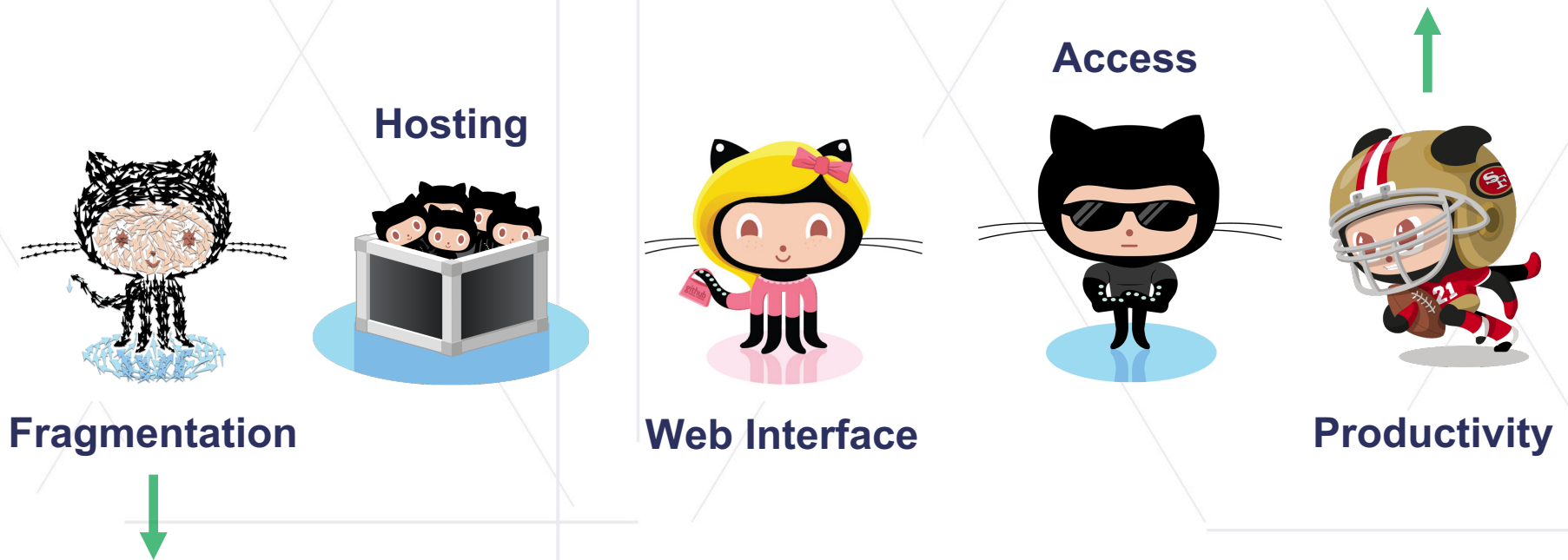
GITLAB

OTHER

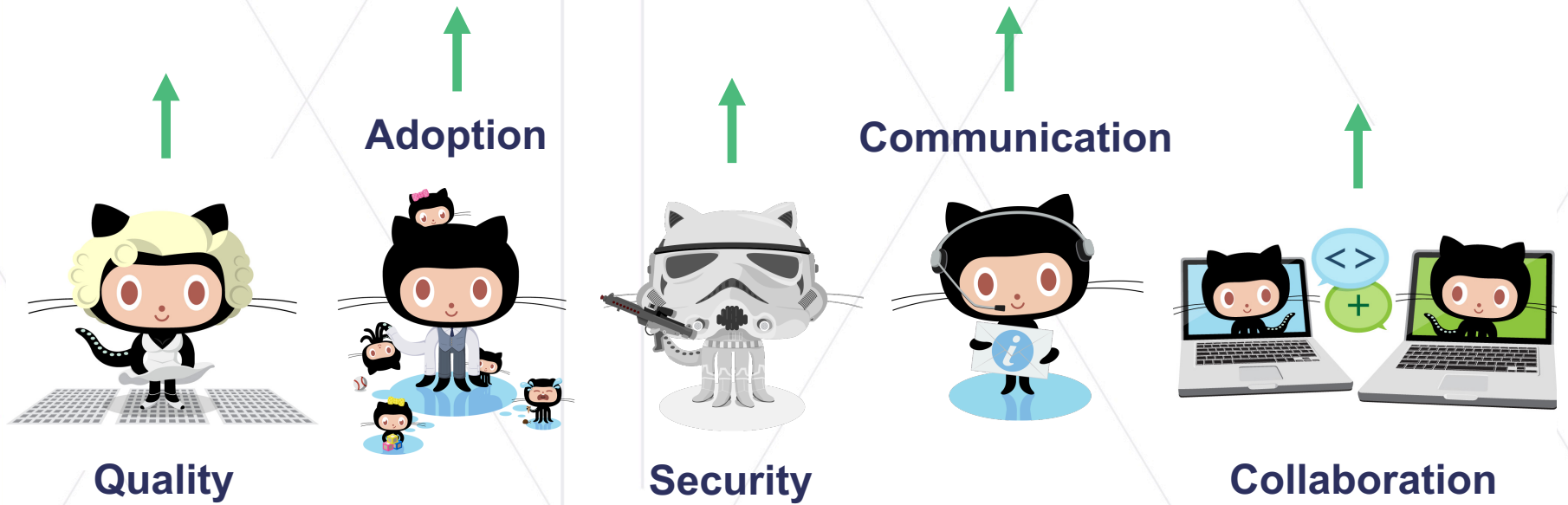
GOODBYE REINVENTING THE WHEEL



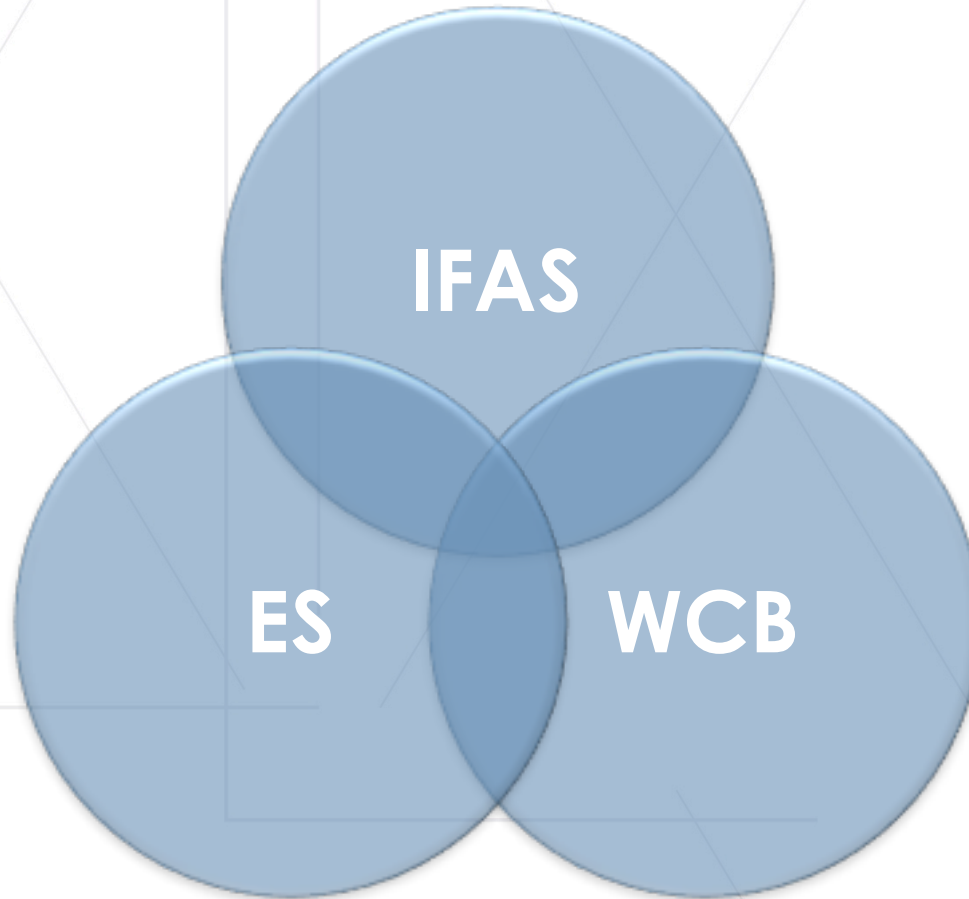
WE GET A LOT OF VALUE



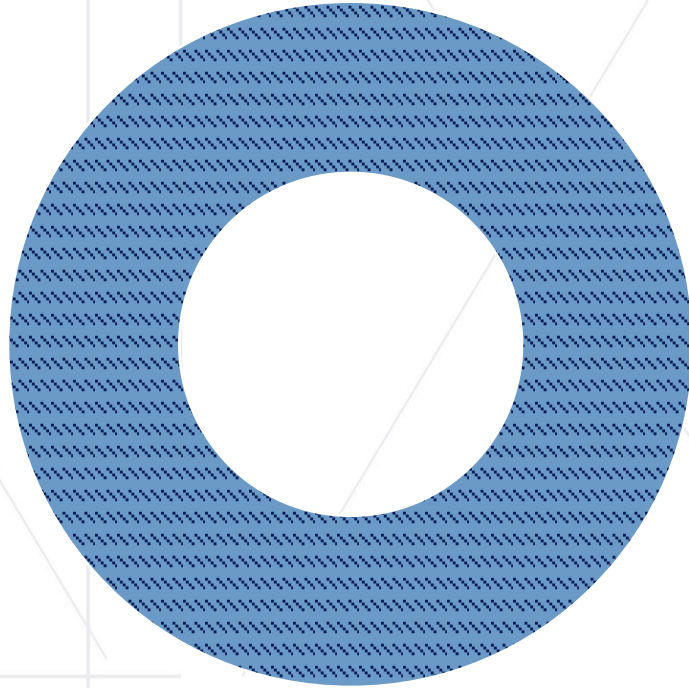
A LOT OF VALUE



A LOT OF OPPORTUNITY

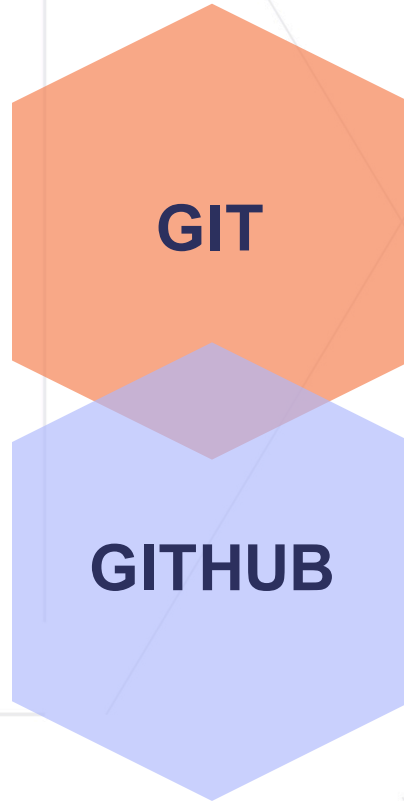


TO SOLVE PROBLEMS AND SHARE SOLUTIONS

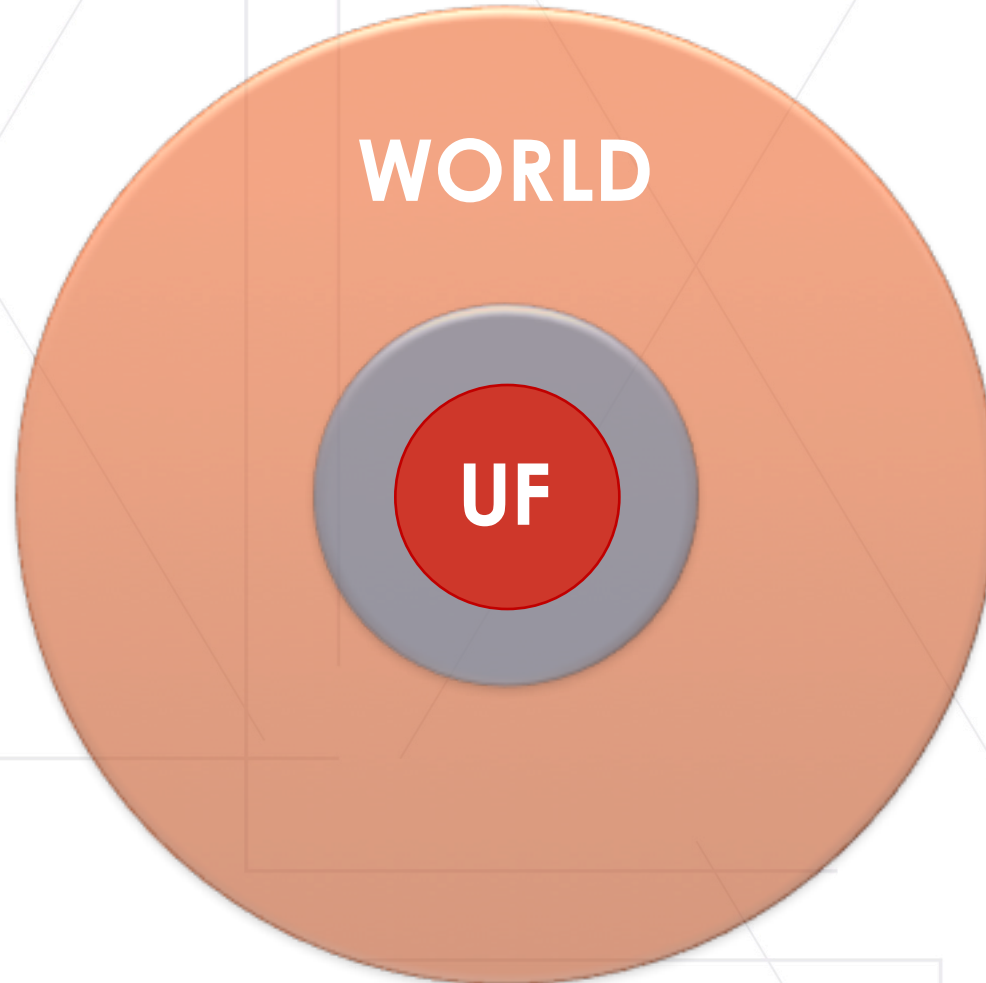


So others don't have to reinvent the wheel

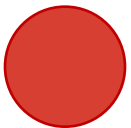
USING A COMMON LANGUAGE/TOOL



IN A SECURE ENVIRONMENT



LEGEND
SERVERS
CODE



- risk

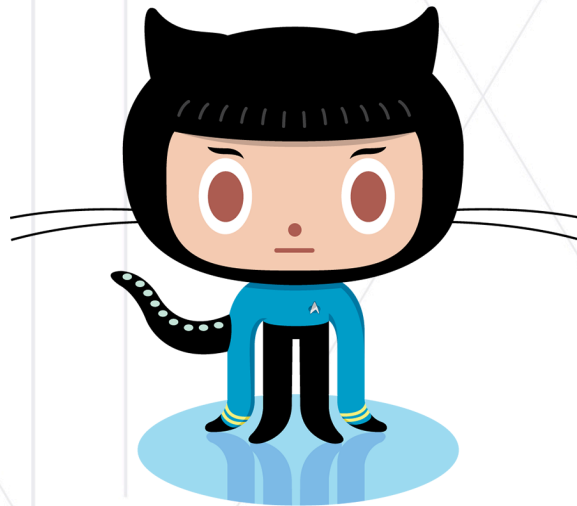
FOR EMPOWERED DEVELOPERS





To build some extraordinary things!!!

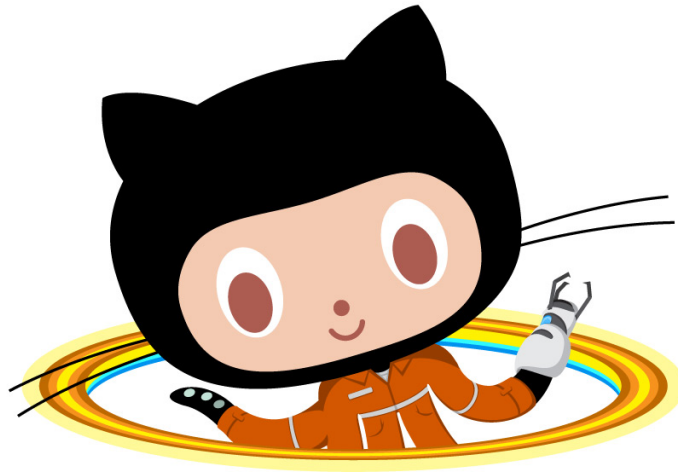
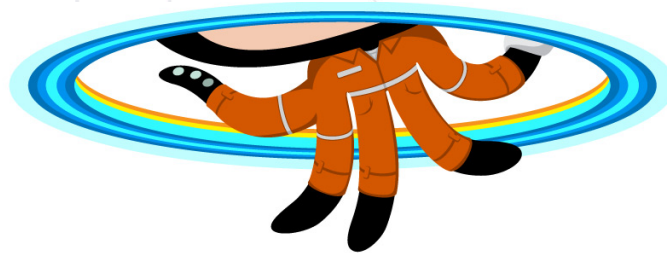
TOGETHER



CALL TO ACTION



THE FUTURE



The future is not a place we go!

THE FUTURE



The future is a place we make!

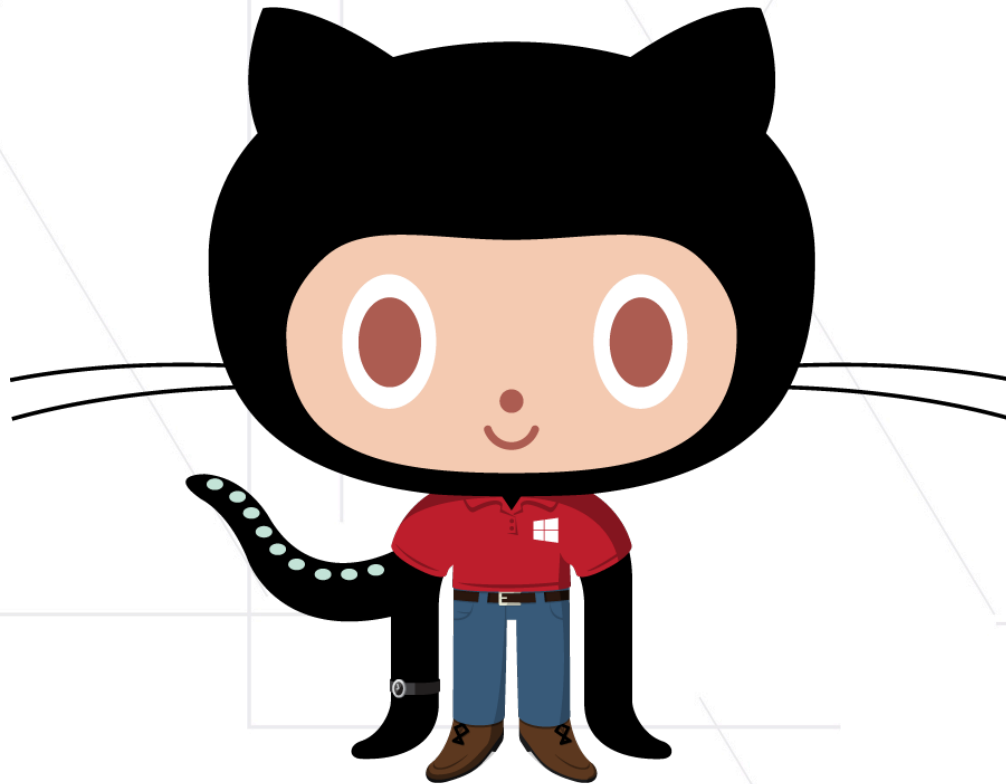
IT'S YOUR TIME



TO SHINE



**FOR APPROXIMATELY THE
COST OF 1FTE**



YOU HAVE THE POWER



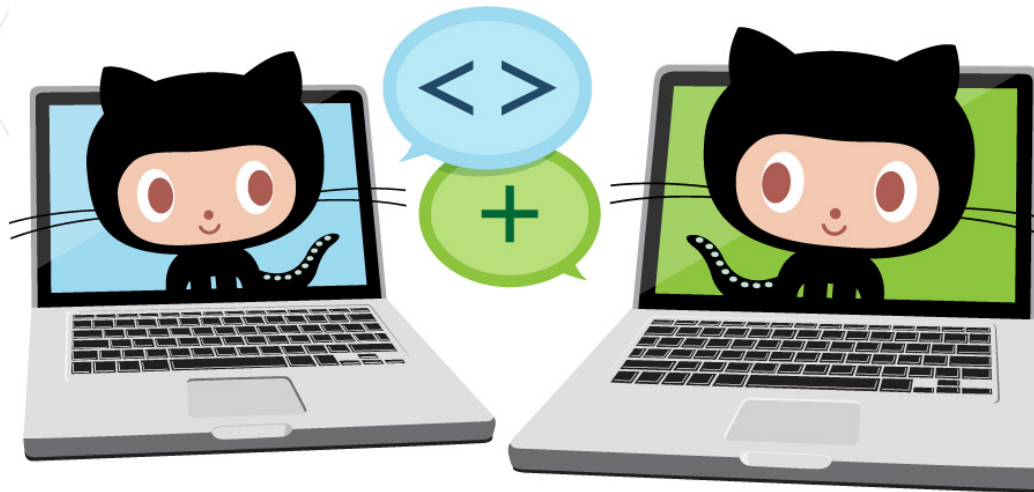
TO PROMOTE A CULTURE



THAT BRINGS PEOPLE TOGETHER



ENCOURAGES COLLABORATION



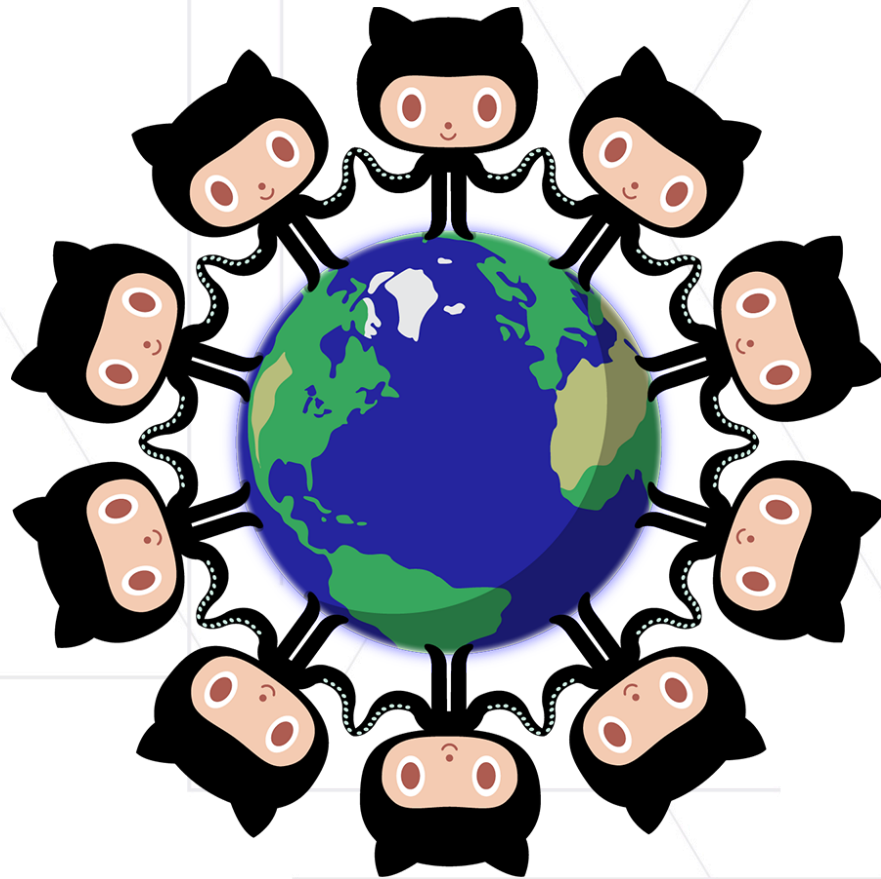
SHARE / REUSE

CONTRIBUTE

HELP

GET HELP

**AND THAT IS A CULTURE I
WANT TO BE A PART OF**



QUESTIONS?

