



BACK-END WEB DEVELOPMENT

Matt Heath
Tech Lead, Platform
Hailo



WORKING LIKE A DEVELOPER

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Tech Lead, Platform
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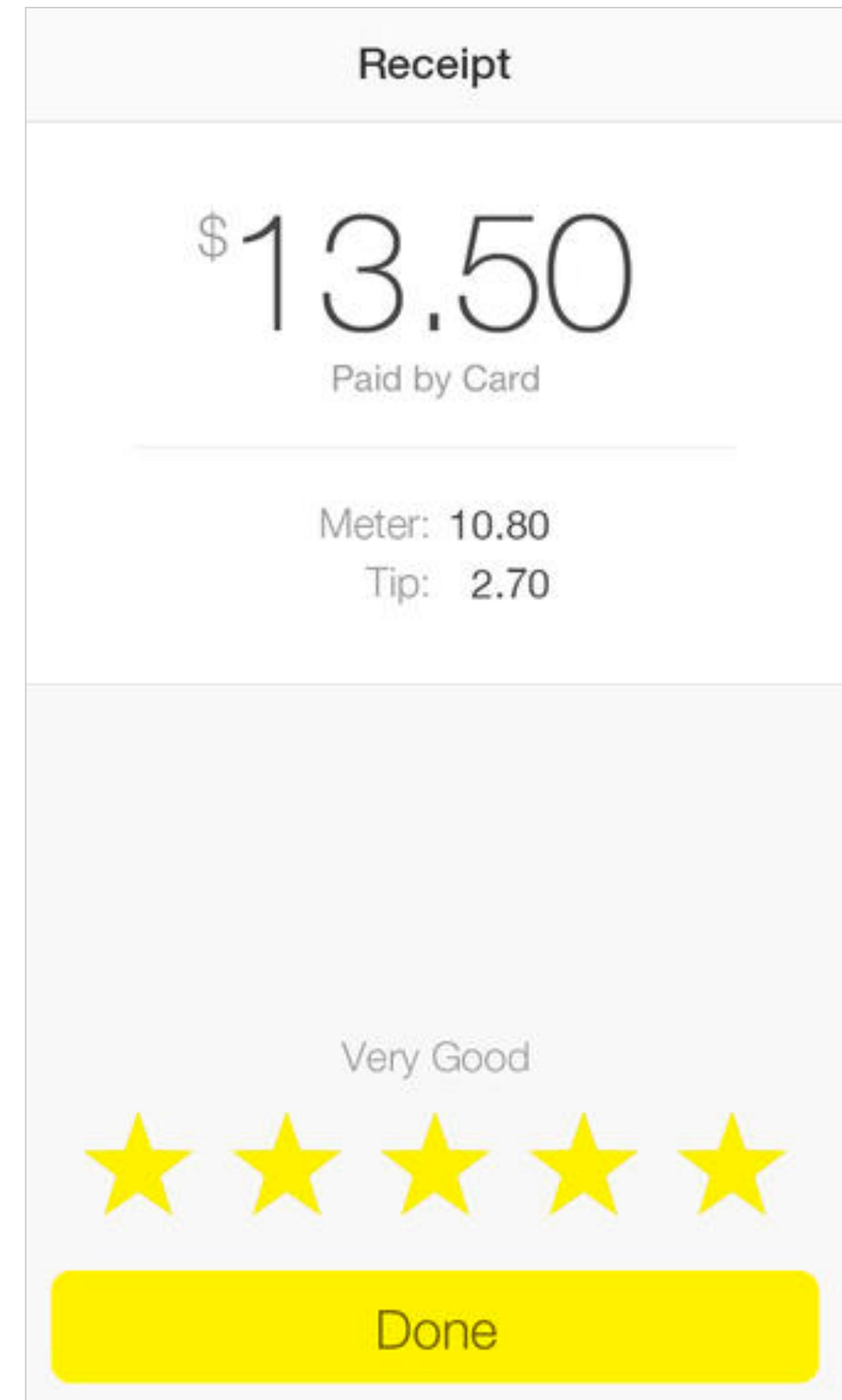
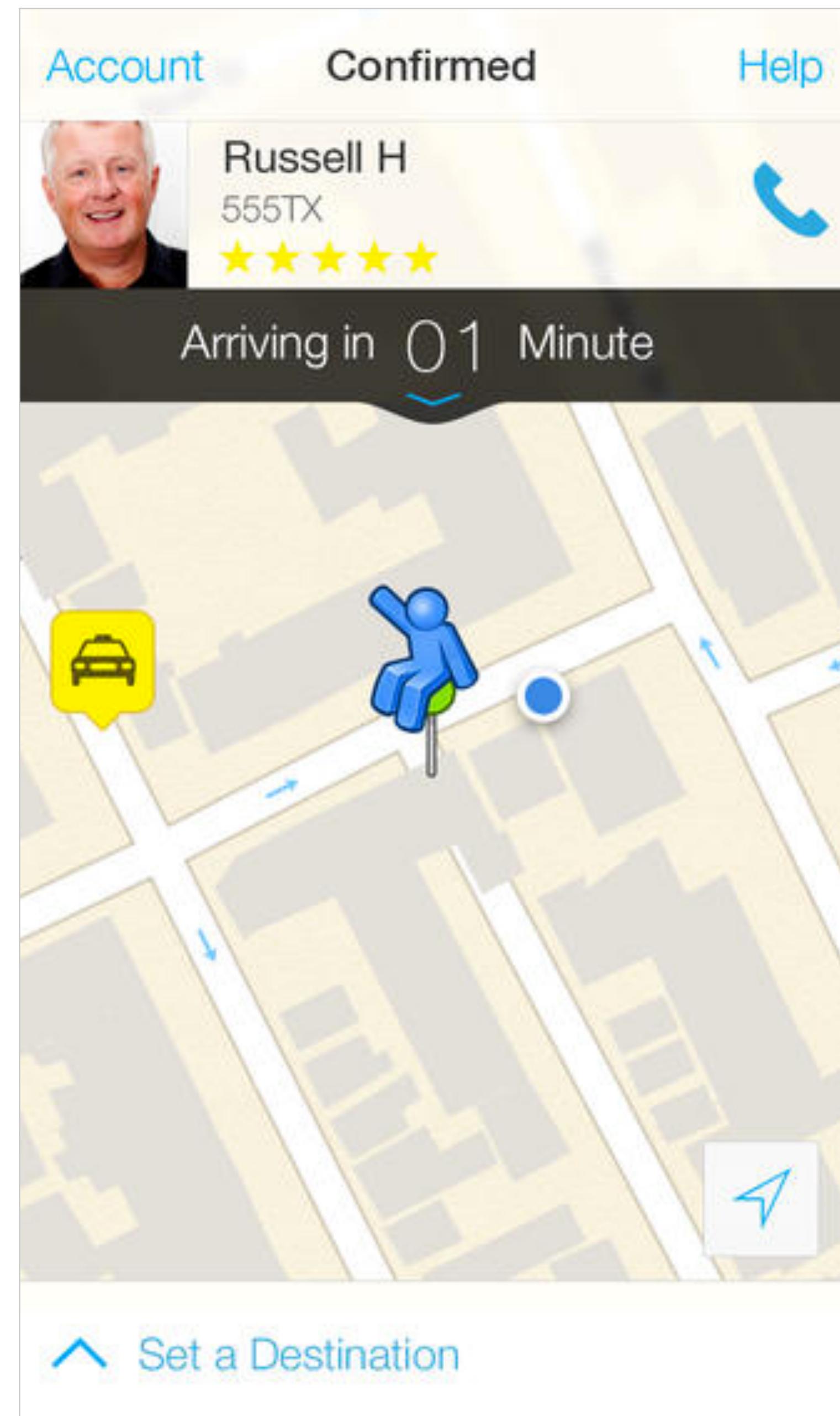
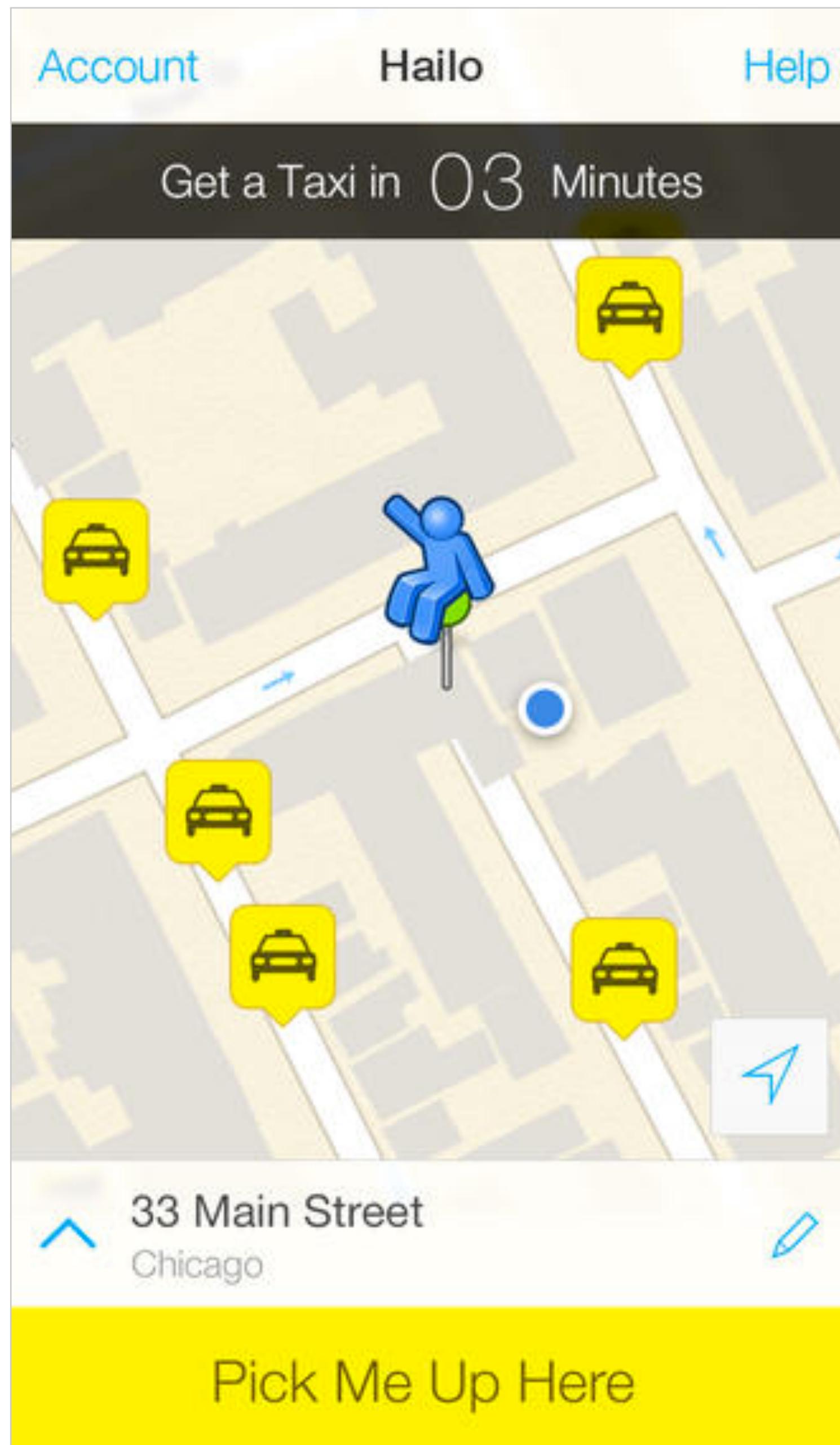
AGENDA

- » Intros
- » What is Web Development?
- » The Command Line
- » The Setup
- » Git & Github

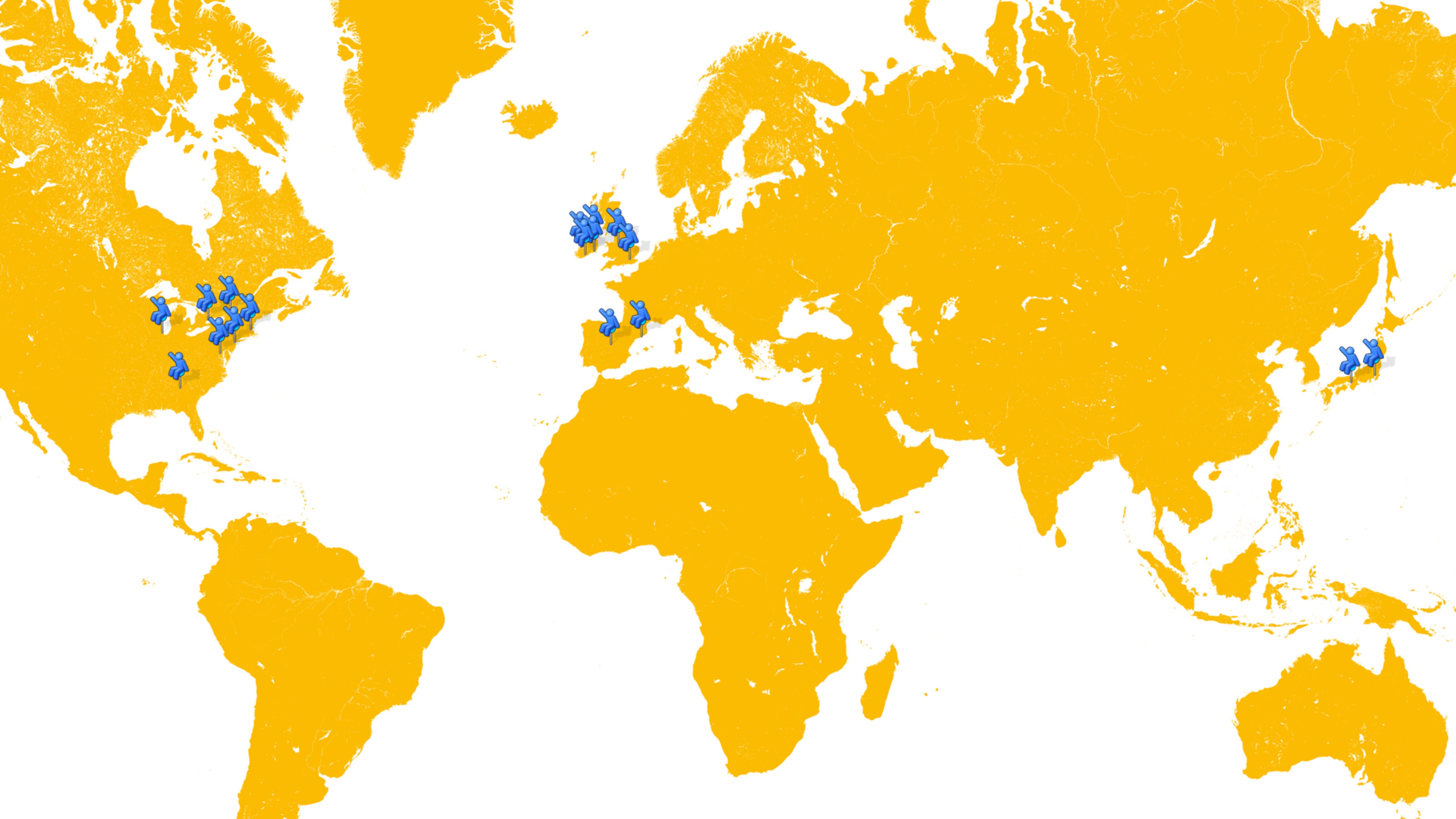


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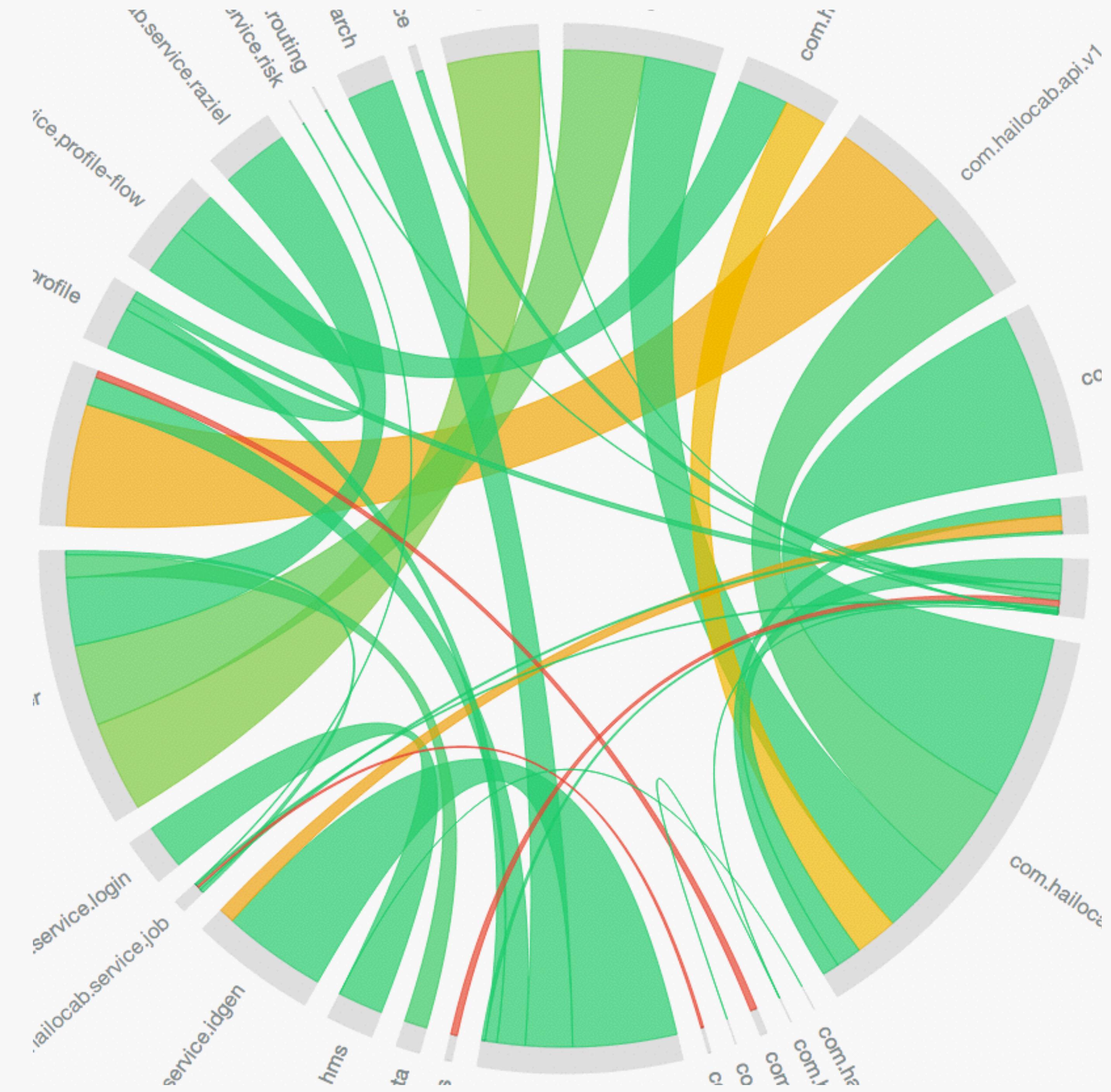


FULL STACK?

PHP / Go API &
Services, MySQL,
Cassandra, RabbitMQ,
NSQ, Zookeeper

Realtime data
Low latency services

DevOps (ruby/go)
Deployment tools
(ruby/go)

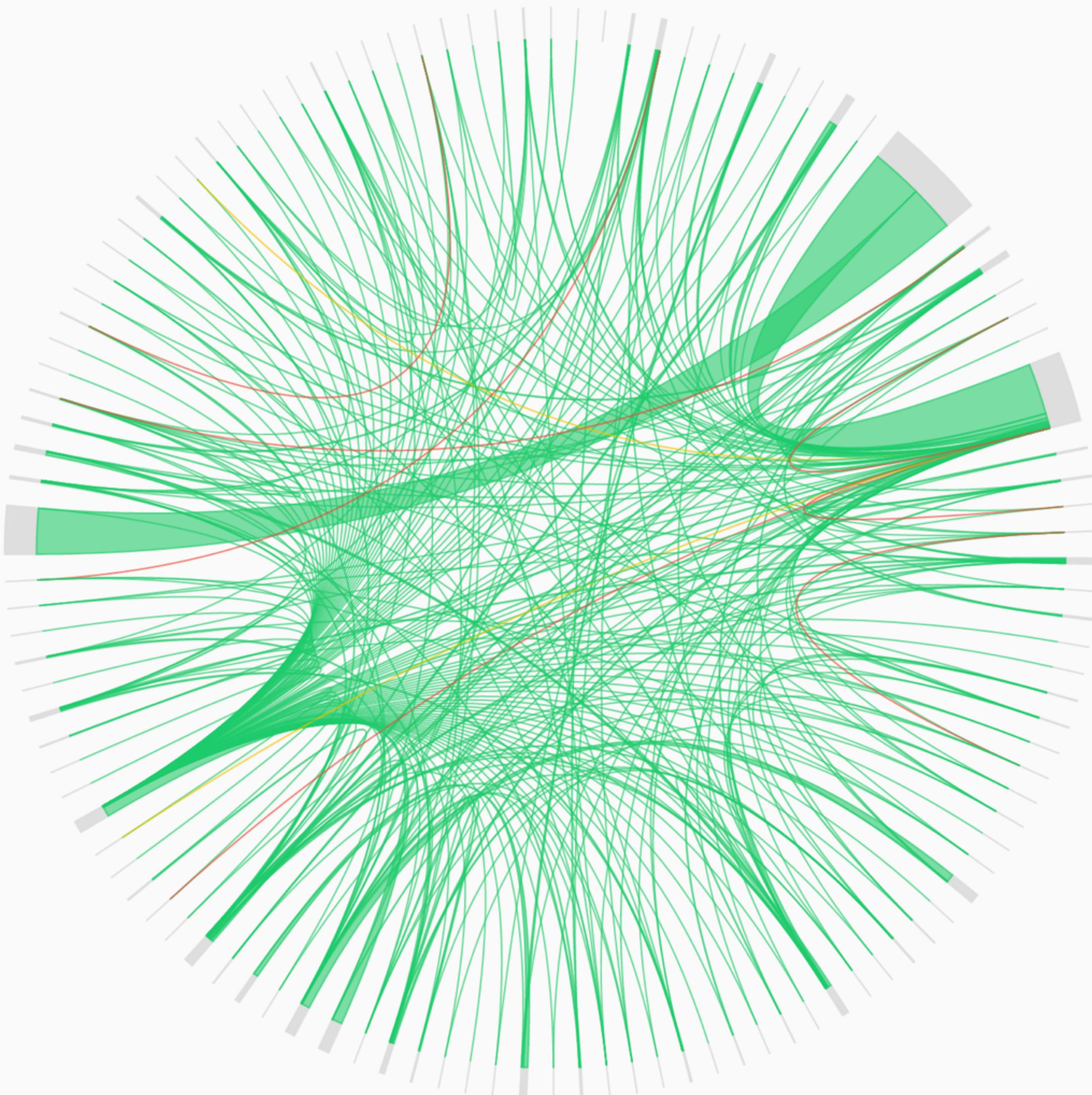


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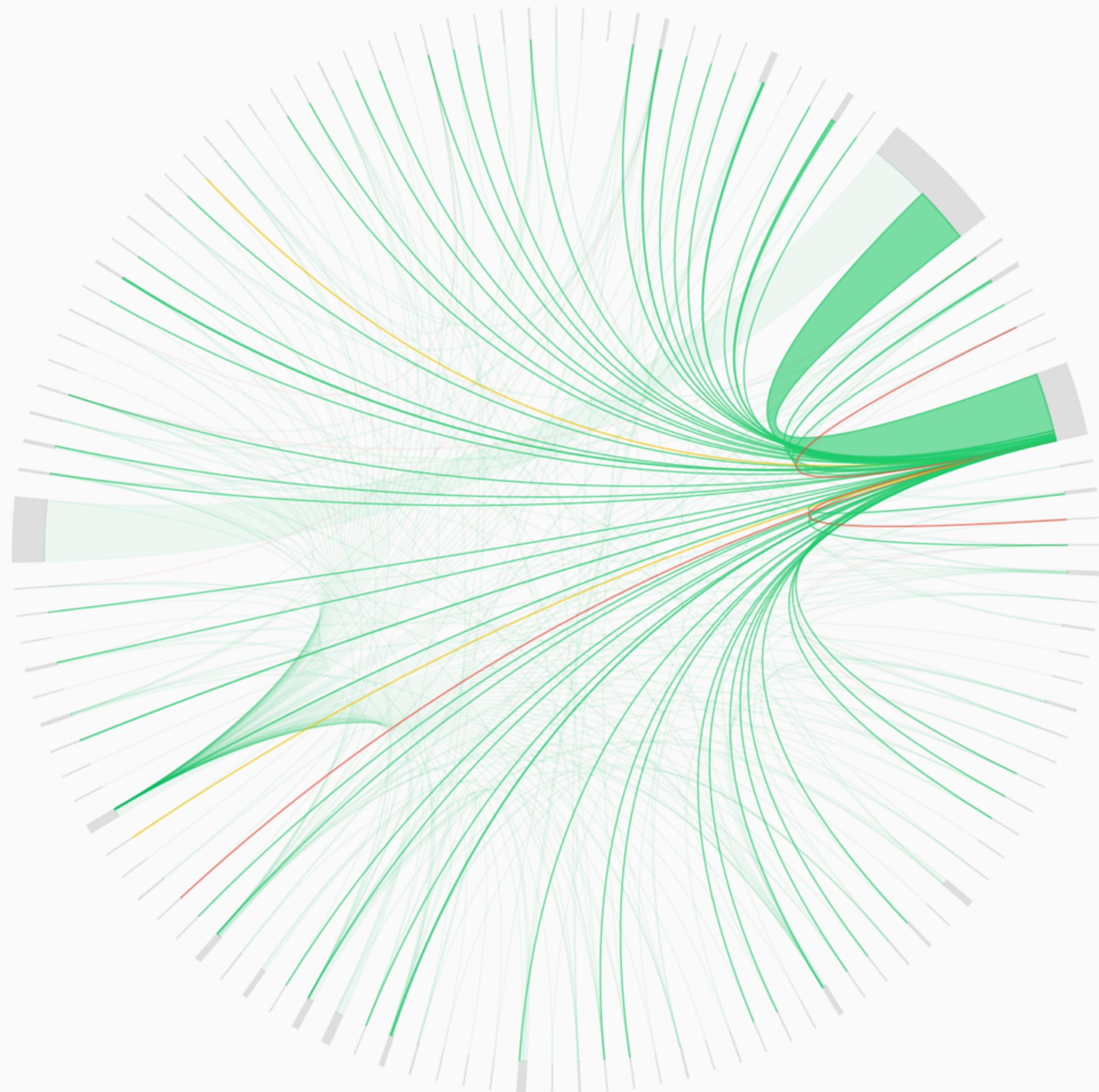


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Services

>  com.hailocab.service.raziel

Health

Builds

Deploy

Description	Keeper of Secrets
Service Owner	 matt@hailocab.com +447900312135
Source Code	github.com/hailocab/raziel

AWS status

20:28 6/5/2014

Service is operating normally:
[RESOLVED]
Network connectivity

[Status page](#)

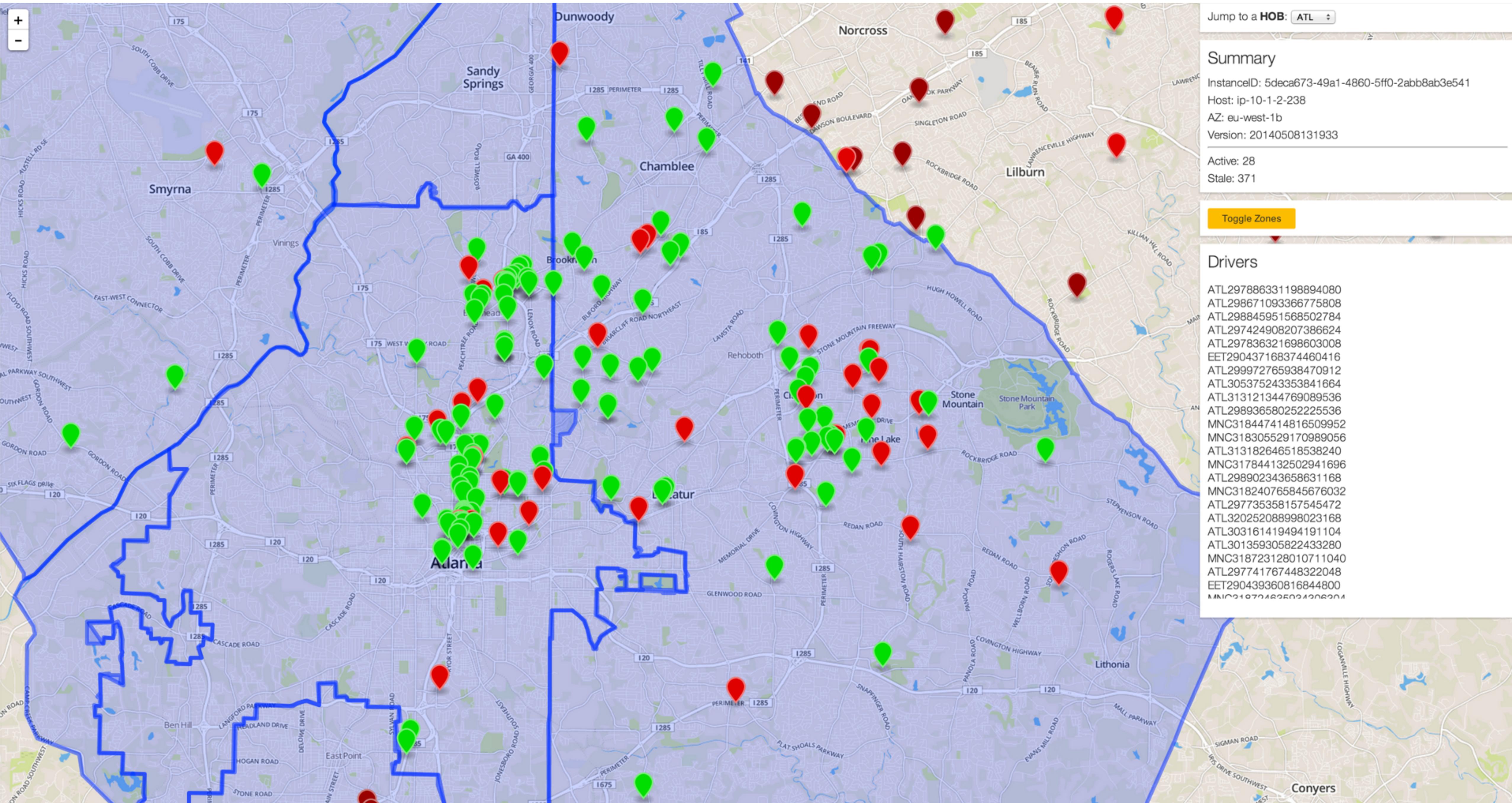
Versions

Version	Branch	Status
20140410121810		✖ Remove

[+ Deploy a version](#)

Healthchecks

	Version	InstanceId	Hostname
com.hailocab.kernel.servicetoservice.auth.badrole	20140410121810	server-com.hailocab.service.raziel-5c299ec1-dcd9-48ed-6a33-1f26b1c173ed	ip-10-2-3-53
	20140410121810	server-com.hailocab.service.raziel-0b0bd7aa-3223-41cb-4ee2-5336bcfa9222	ip-10-2-2-4
	20140410121810	server-com.hailocab.service.raziel-92505301-ad02-4b1f-61c8-22d3b7fdd151	ip-10-2-2-169
com.hailocab.kernel.resource.capacity	20140410121810	server-com.hailocab.service.raziel-5c299ec1-dcd9-48ed-6a33-1f26b1c173ed	ip-10-2-3-53
	20140410121810	server-com.hailocab.service.raziel-0b0bd7aa-3223-41cb-4ee2-5336bcfa9222	ip-10-2-2-4
	20140410121810	server-com.hailocab.service.raziel-92505301-ad02-4b1f-61c8-22d3b7fdd151	ip-10-2-2-169
com.hailocab.kernel.servicetoservice.auth.goodrole	20140410121810	server-com.hailocab.service.raziel-5c299ec1-dcd9-48ed-6a33-1f26b1c173ed	ip-10-2-3-53
	20140410121810	server-com.hailocab.service.raziel-0b0bd7aa-3223-41cb-4ee2-5336bcfa9222	ip-10-2-2-4





ADMIN

During this course we will learn (at a high level):

- » Command Line / Terminal
- » Git and GitHub
- » Ruby programming language
- » Rails web application framework
- » (Basic) Database Modelling

To pass the course you will need to:

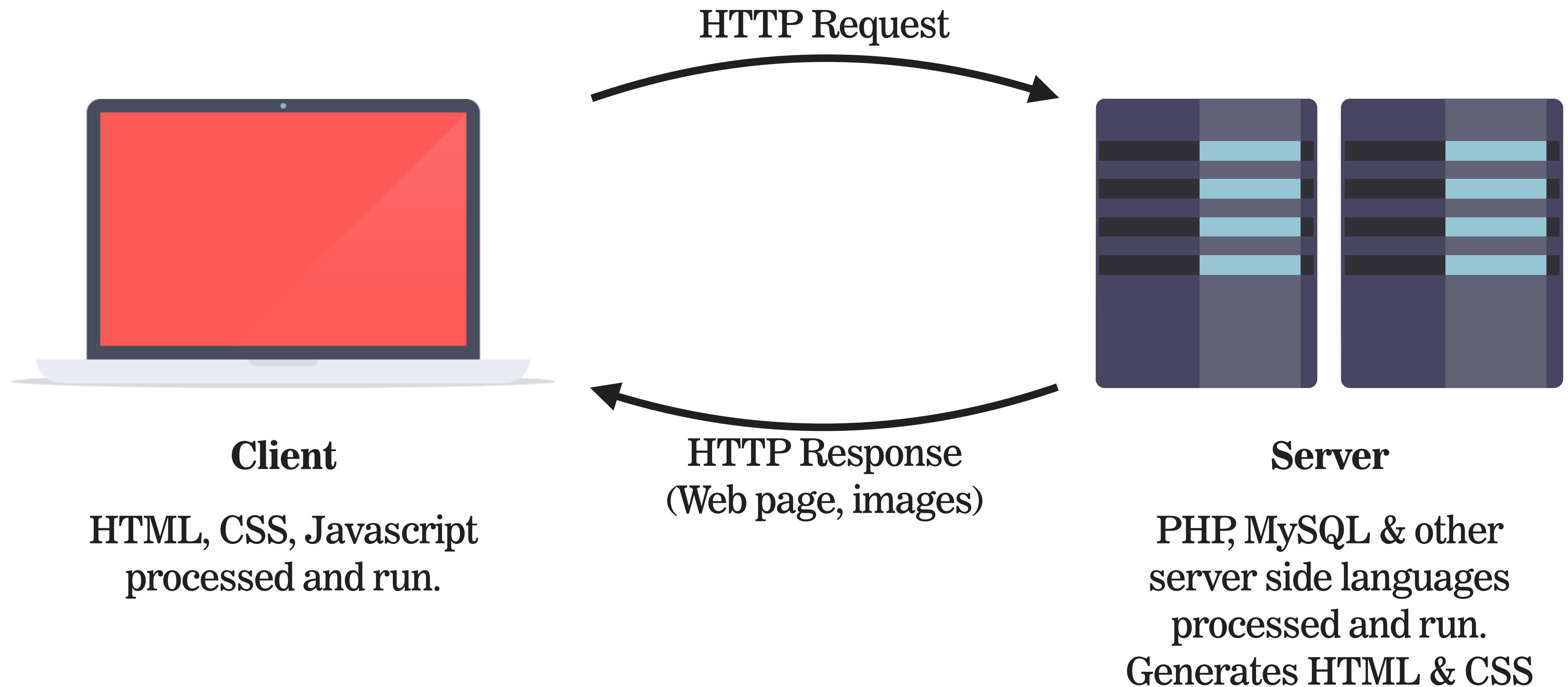
- » Complete at least 80% of all assigned homework
- » Complete a final project

ADMIN

What you will get from us:

- » In class labs
- » Homework
- » Slides / handouts
- » Instructor & TA!

THE WEB APPLICATION STACK



BACK-END & FRONT-END

Let's define a few terms:

- » **Web Development**
building apps for the web
- » **Front-End Development**
client / browser code (HTML, CSS, JS)
- » **Back-End Development**
server-side code (Ruby, Python, Go)

WORK LIKE A DEVELOPER

INTEGRATE INTO THE DEVELOPER COMMUNITY

- » Choose the right OS, editors, & tools for your projects.
- » Leverage the online community's vast libraries and documentation - eg. gems & blogs.
- » Spread the knowledge you gain, and give back to the community when you can.
- » Take pride & and joy in what you work on.
- » Be efficient!
 - » Use the keyboard as much as possible
 - » If you find yourself doing the same thing repeatedly, automate it.

COMMAND LINE

WHAT IS IT?

The command line is a terminal giving you direct access to your operating system. You can enter simple commands to perform a variety of functions.

Many of the tasks we need to carry out (such as committing our code) are best performed in the command line.

COMMAND LINE

HOW DO I START?

For Macs:

- » Open the "Terminal" app
- » For a better experience, download and install "iTerm 2"

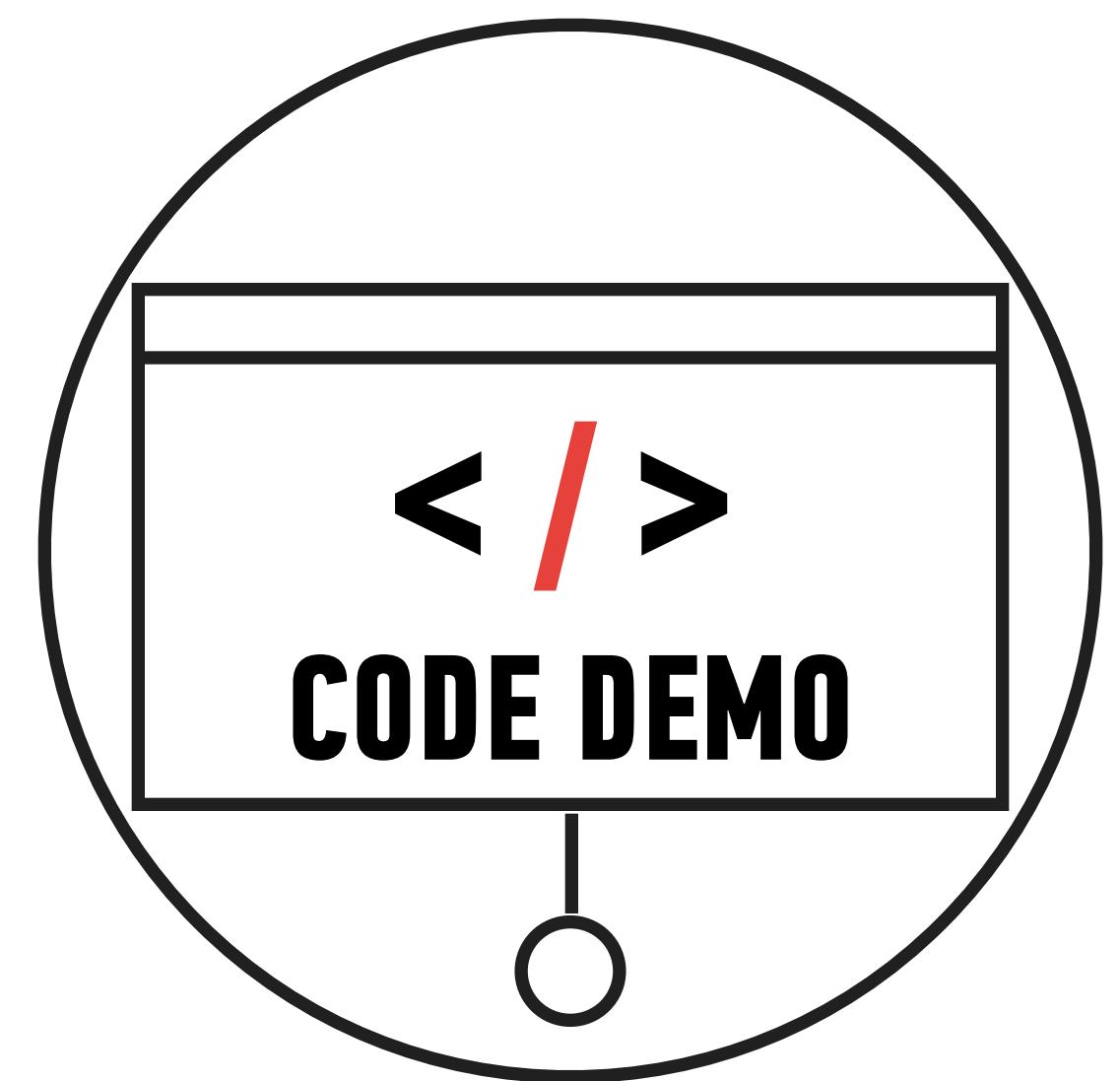
For Windows:

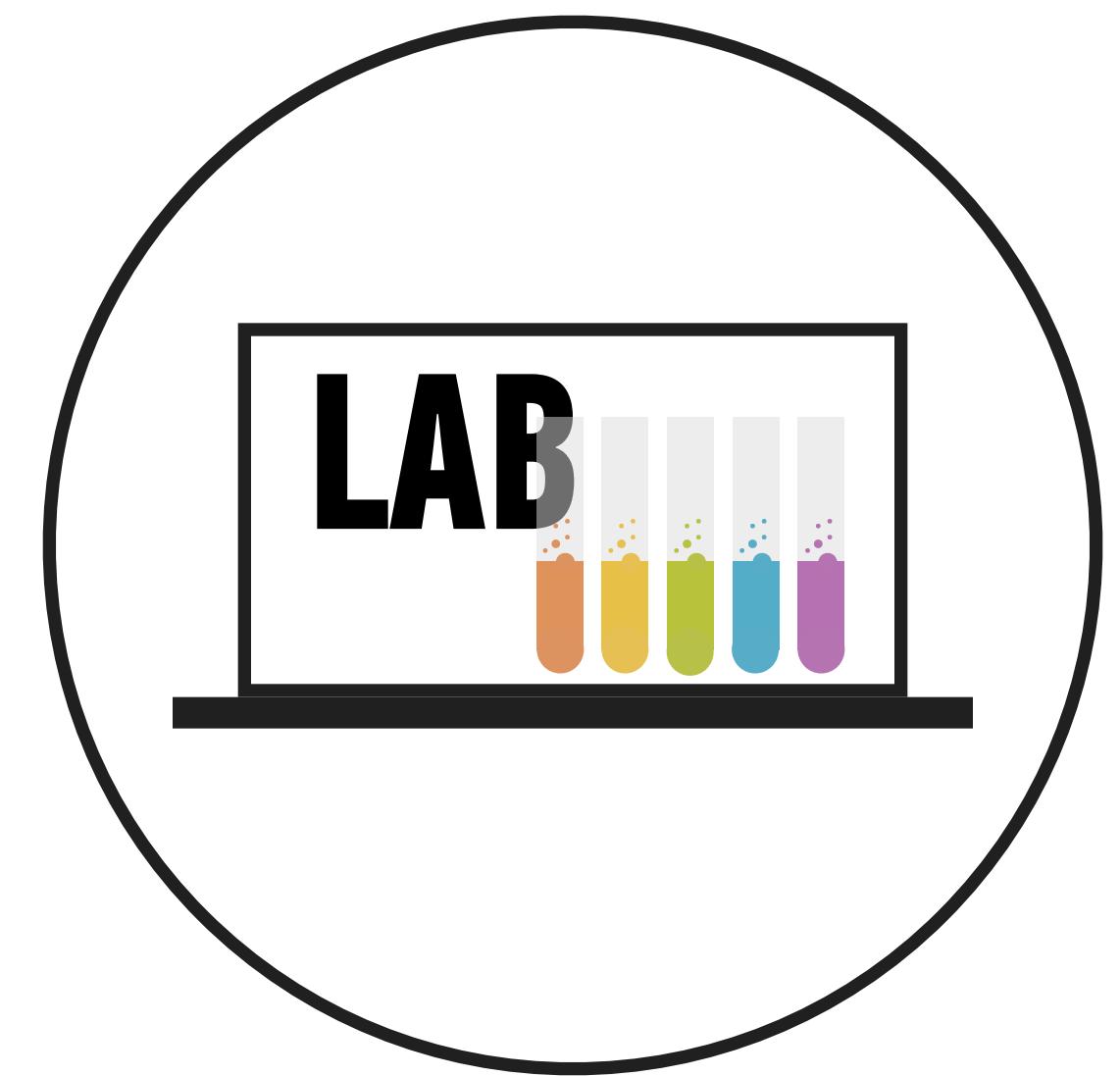
- » Open the "Command Prompt" application
- » For a better experience, try "Console"
<http://sourceforge.net/projects/console/>

COMMAND LINE

WHY ARE WE USING IT?

- » In order to learn Ruby without Rails, we need to learn how to run Ruby programs on their own.
- » To do so, we can simply create "stand-alone" Ruby applications.
- » A stand-alone Ruby app consists of one or more Ruby files (files that have a .rb extension)
- » Once you have written a Ruby file, you can run the file by typing:
 - » “**ruby file.rb**” (this would run a Ruby file named file.rb)
- » This is the basis of how we will be writing and testing our Ruby applications in the initial portion of this course





GIT

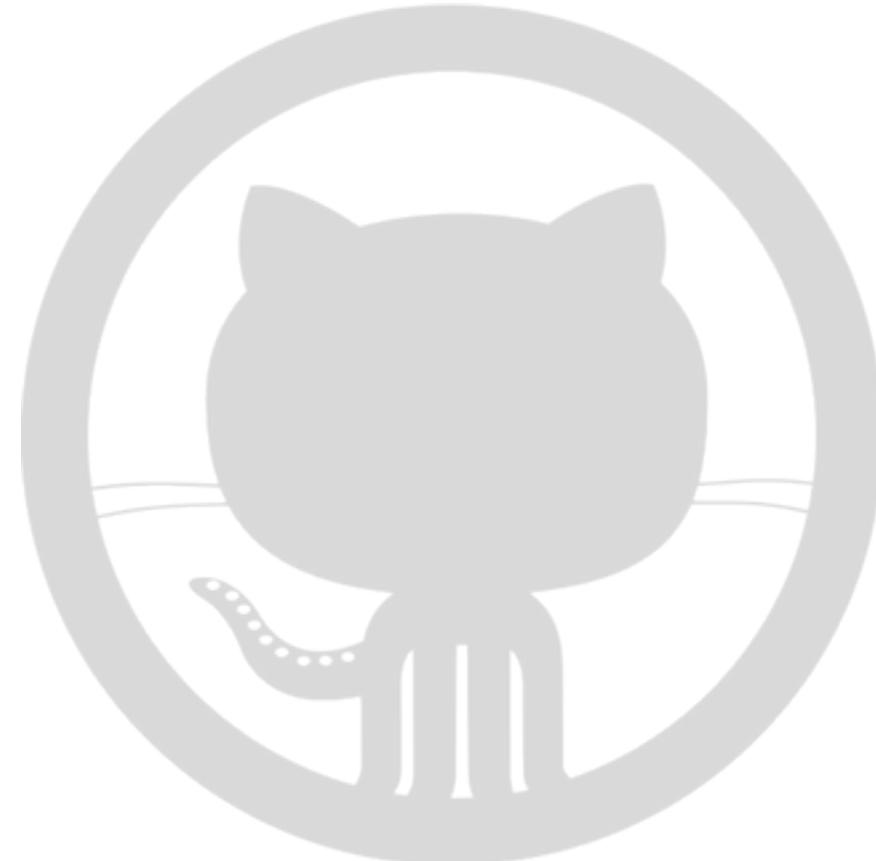
WHAT IS GIT?

- » Git is a source control management tool.
- » Git allows you to store and update your code in a structured way.
- » Git includes history of changes you make, so you can create "checkpoints" and track your work better over time.
- » Git is an intelligent tool, and does many things for you automatically, but can be tricky to use in some cases. It takes a bit of learning to get fully comfortable with Git.

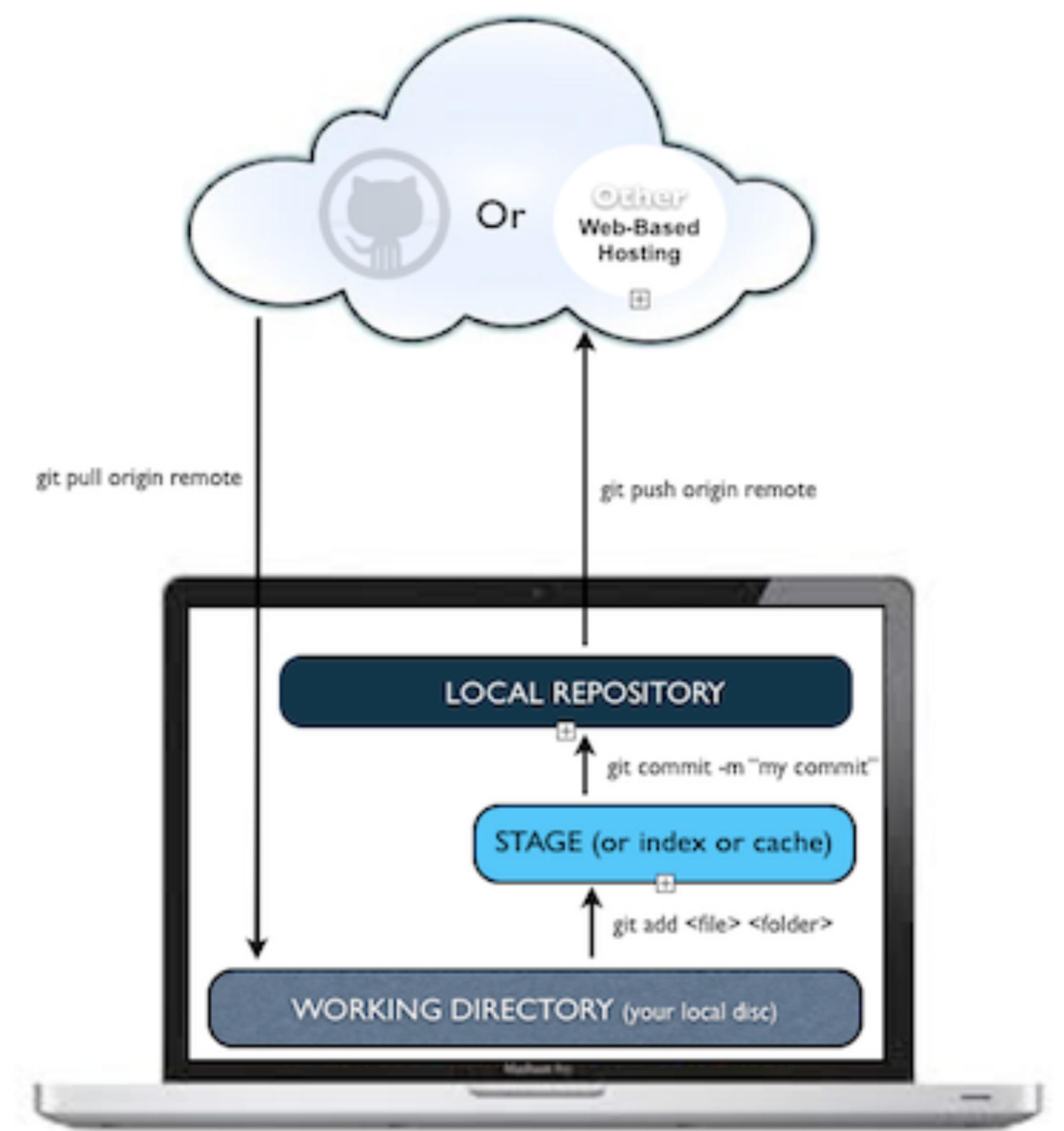


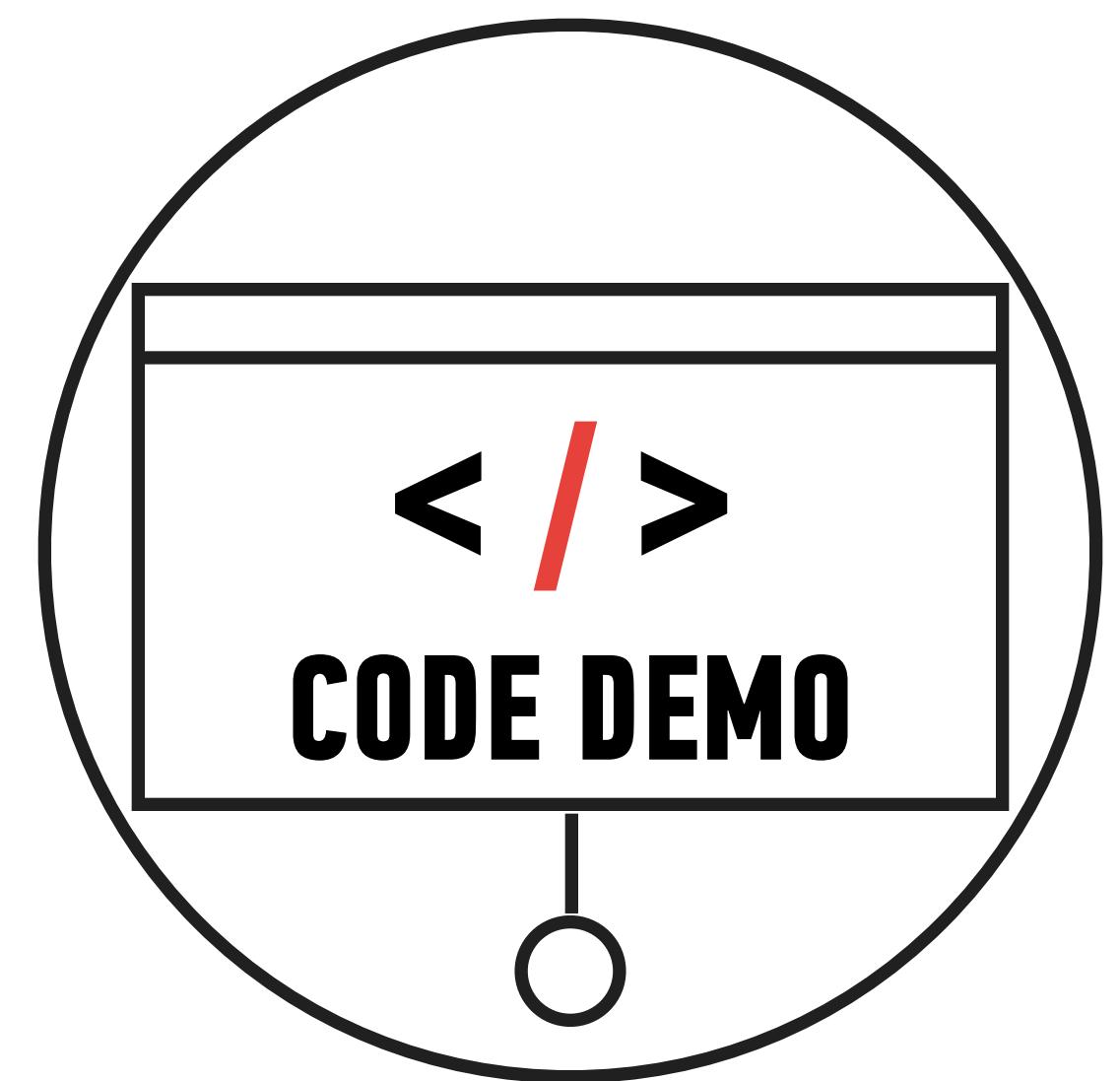
GIT

WHAT IS GITHUB?



- » GitHub is a service that hosts Git repositories in the cloud
- » They are hosted remotely by GitHub, and can be downloaded from / uploaded to over the internet
- » GitHub allows you to easily distribute code to others by sharing your repository
- » GitHub lets you view your code online easily
- » GitHub is free to use as long as you make your code public
- » Private repositories cost a monthly fee

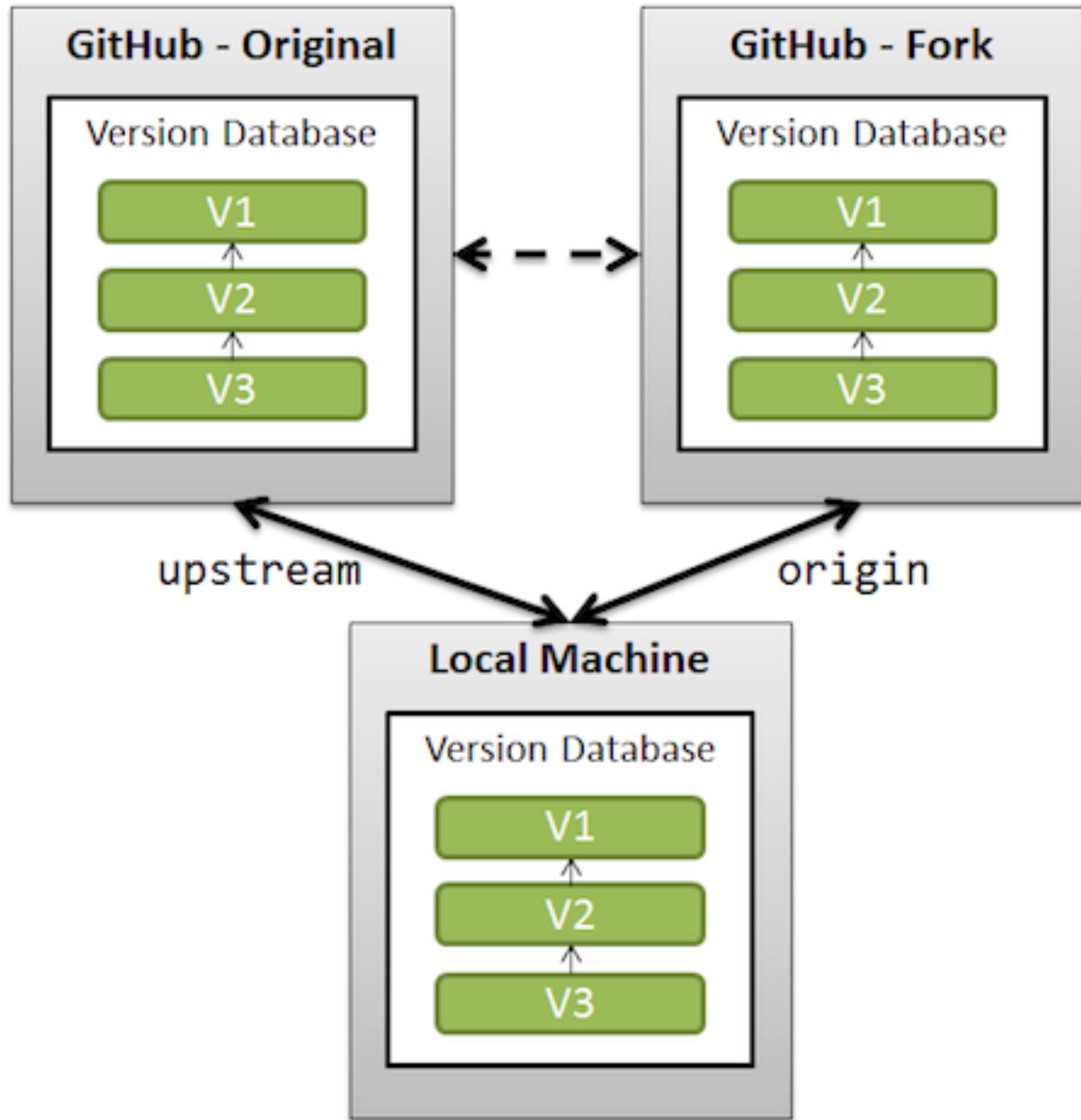


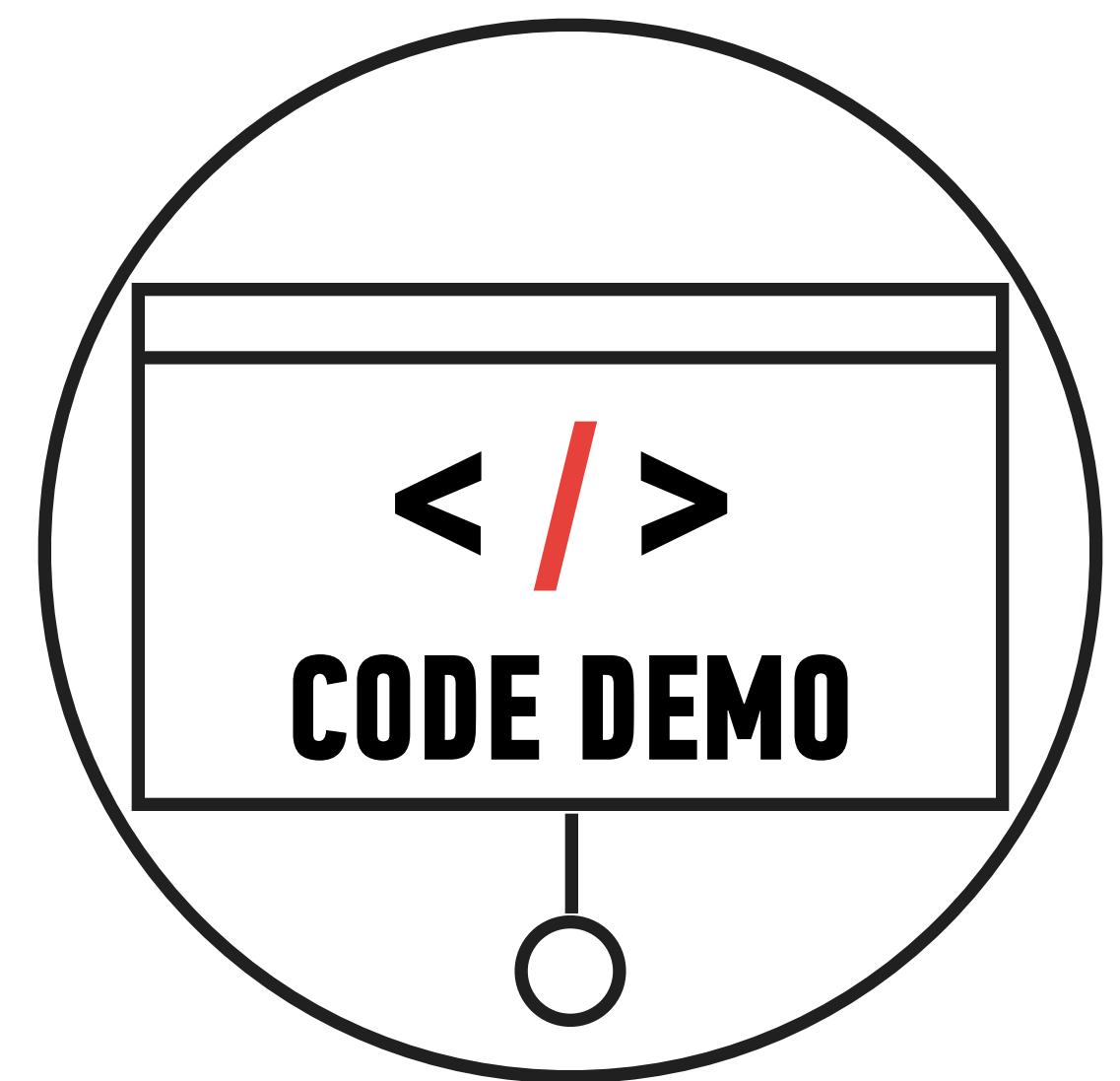


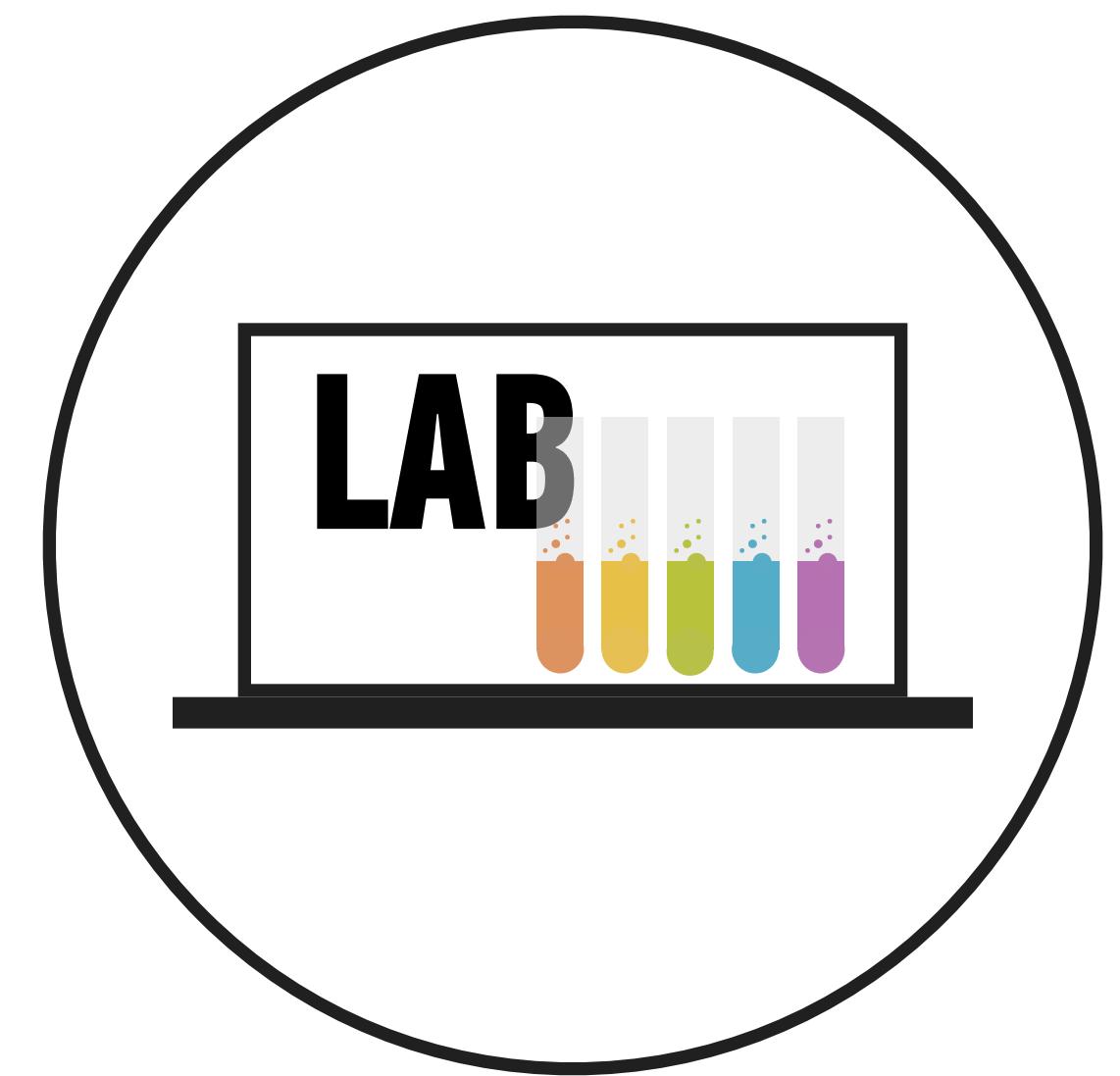
GITHUB

WHAT IS A GITHUB FORK?

- » As you work on projects, we want you to use GitHub.
- » To gain easy access to all the class files, you will check out the class GitHub repository on your machine.
- » In order to ensure that changes you make for your projects do not mix with other students work, you will create a fork of the class GitHub repository.
- » You will then make changes to your fork, and occasionally pull down changes from the origin class repository.







REVIEW

- » The command line is a terminal giving you direct access to your operating system
- » Git is a source control management tool which allows you to store and update your code in a structured way
- » Github stores your Git repositories in the cloud