

# HUDK 4050: CORE METHODS IN EDM

# In the news

## Despite drop in funding, edtech still presents a huge opportunity

**YOURSTORY**

ENG ▾

According to *YourStory* data, since January, edtech startups have raised \$94.21 million through 34 deals as against \$107 million across 46 deals in the corresponding period last year.

**EdTech**  
Focus On Higher Education™

## The Fault Lines Between Sharing and Shilling for an Edtech Product



*Silicon Valley Courts Brand-Name Teachers, Raising Ethics Issues*  
The New York Times



**Virtual science lab startup Labster bags \$10M to accelerate its ed tech play**

## Princeton Students Use YouTube to Motivate High Schoolers

Video interviews leverage advice from STEM students, who offer guidance on transitioning to college majors.

## Is Your Adaptive Learning Tool Safe?

New research recommends schools put data protection best practices in place when using new ed tech.

**INSIDE**  
HIGHER ED

## Guest Post: Ed Tech's Collision Course

Are transparency, accuracy and honesty all fair game for 'disruption'?

WASHINGTON  
**Examiner**

Department of Education kills Obama-era deal to share student loan data with CFPB

**CAMPUS**  
**TECHNOLOGY**

**Barnes & Noble Acquires Deeper Roots in Ed Tech**

**Data Sheet—Talking With Tim Cook About Apple as a Force for Good FORTUNE**

Good Relationships Are Data-Driven: A Higher Education Example

**Forbes**

**Parents cite student privacy concerns with popular online education platform**

**The Washington Post**  
Democracy Dies in Darkness

# Today

- Differences between LA & EDM/Why is it so difficult to measure learning?
- Workflow: **Github** - RStudio - **Zotero**

# Differences between EDM & LA?

- EDM = rooted in tech field, LA = ed field
- EDM = automation/tech driven, LA = using tech as a tool to enhance human judgement
- Methodological differences EDM = machine learning, LA = text & SNA
- EDM = individual, LA = holistic
- Challenge of integrating the tech and ed

# Why is it so difficult to measure learning?

- Don't know where a student is starting from
- Can't measure all the ways that people learn
- Based on proxies, but proxies change based on context not just individual
- We have to simplify but may throw away the signal and keep the noise

The GitHub Octocat logo is centered in the background. It consists of a dark blue circular shape with a white octocat silhouette inside. The octocat has a light blue face and a light blue tail with a dotted line. The text "Git & Github" is overlaid on the logo.

# Git & Github

THIS IS GIT. IT TRACKS COLLABORATIVE WORK  
ON PROJECTS THROUGH A BEAUTIFUL  
DISTRIBUTED GRAPH THEORY TREE MODEL.

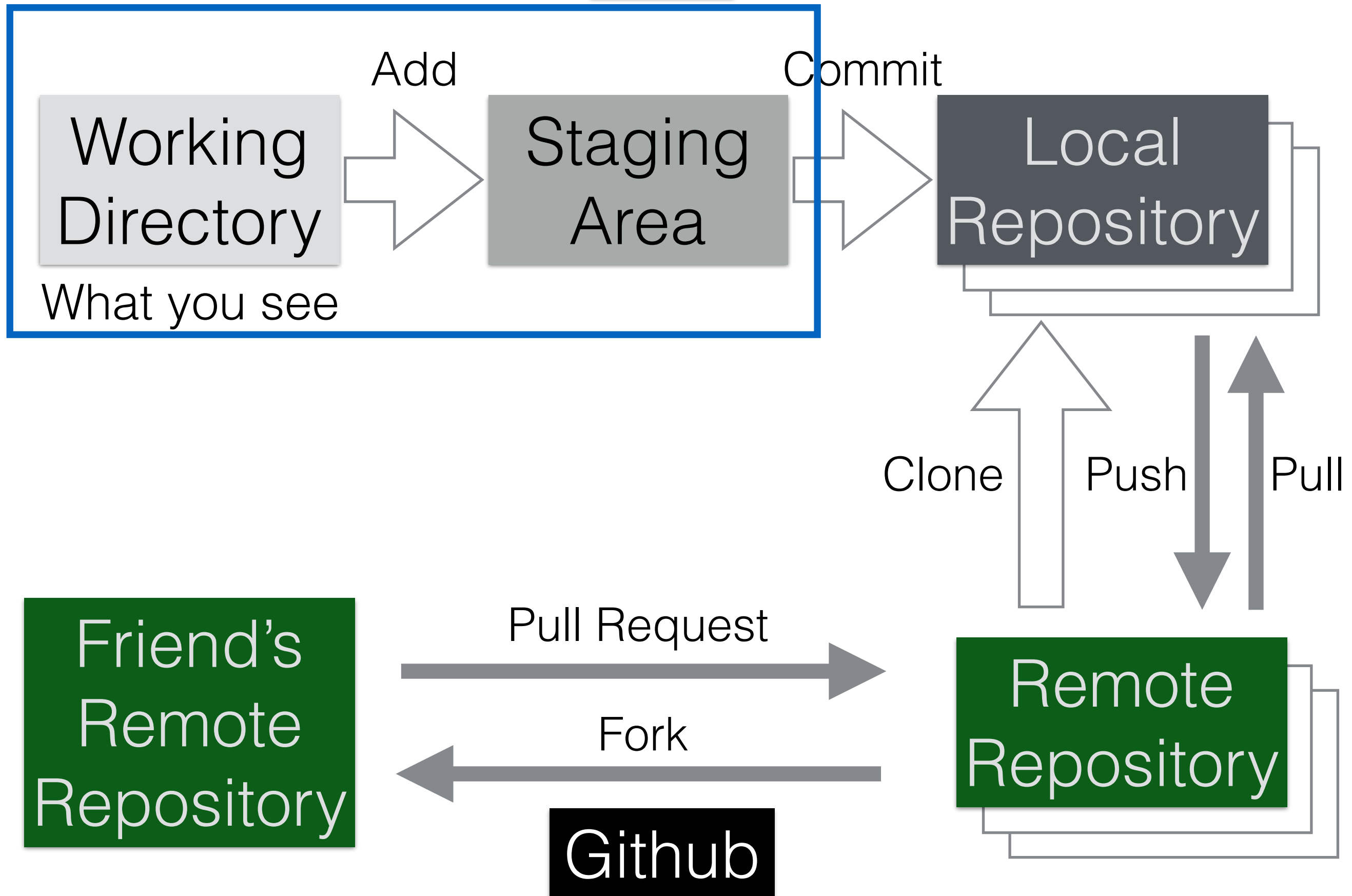
COOL. HOW DO WE USE IT?

NO IDEA. JUST MEMORIZE THESE SHELL  
COMMANDS AND TYPE THEM TO SYNC UP.  
IF YOU GET ERRORS, SAVE YOUR WORK  
ELSEWHERE, DELETE THE PROJECT,  
AND DOWNLOAD A FRESH COPY.



RStudio

Git






# Functions

- Open syllabus
- RStudio integration

[https://github.com/core-  
methods-in-edm/syllabus](https://github.com/core-methods-in-edm/syllabus)

# Github Forking

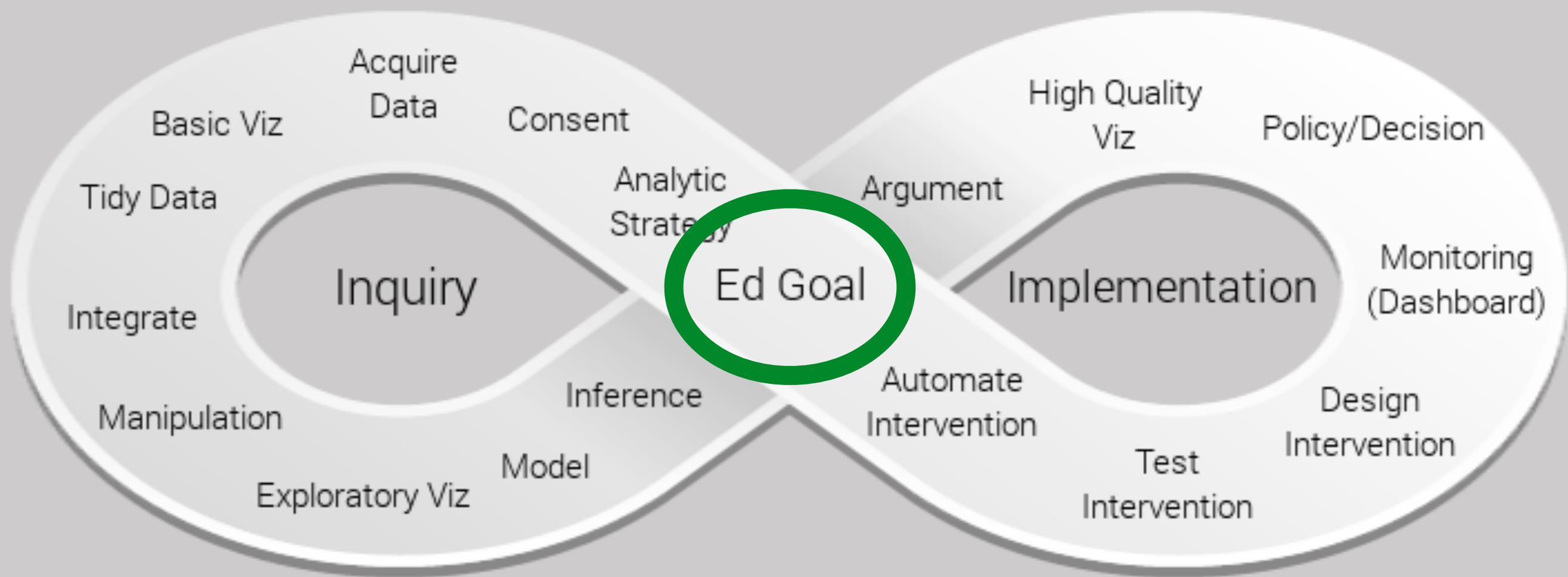
- Log into Github/Create account if needed
- “Fork” core-methods-in-edm/syllabus page to your personal account
- Click on the “README.md” file in your clone’s version
- Find something you would like to change
- Click  and change it!
- Scroll down and click “Commit Change”
- Click on the “Pull Requests” tab and then “New pull request”
- Describe the change you made in the message and click “Create Pull Request”

# Zotero

- Install
- Download the .rmd file
- Upload into your account
- Write a note on differences between EDM & LA

# Educational Goals

# Ed Data Science Cycle



“It’s better to be at the bottom of the ladder you want to climb than at the top of the one you don’t.”

–Stephen Kellogg, 2013

# Google Books Ngram Viewer





# Why?

- Education is controversial
- Concepts cross disciplinary lines
- Vocabulary is slippery
- Systems are complex

# Characteristics

- Specific/tightly defined
- No jargon
- Measurable
- Attainable
- Relevant
- Time-limited
- Defined level of inference
- Contextual framework
- They can change (BUT keep a record of the change)
- Can be to answer a question (To determine the time of day students write the most words.)
- Needs to be workshopped with others

# Activity

1. Find a partner
2. Determine one educational goal that you would like to define for yourself, for this semester
3. What information would you need to allow you to determine if you had met that goal