HUDK 4050: CORE METHODS IN EDM

9/10/19 1:22 PM

If you have not completed the entrance survey:

http://bit.ly/HUDK5053-Entrance

In the news

U.S.News & WORLD REPORT

What Changed in How the 2020 Best Colleges Rankings Were Calculated?

DAILY NEWS

New Education Dept. data paints less rosy picture of school bus debut on 1st day of classes

CNBC make it

Here's how much college cost the year you were born

Forbes

We're Spending $11B on Education Technology: How Do We Know If It's Working?

Bloomberg

When Elon Met Jack: Musings on AI, Mars and the End of Civilization

Events

Title	Date - Time	Location
Masclab Open Day	09/11 - 12:00pm	HM138
Research at Amazon AWS	09/11 - 12:00pm	Davis Auditorium
Rapid Response Research in DS	09/13 - 12:00pm	1406 Nth Corner
Our Tech Futures	09/21 - 10:00am	Columbia
AI in the Classroom	09/20 - 3:00pm	YC
Careers in Data Science in Ed	09/25 - 3:30pm	TC
Formal & Informal LA (lunch)	10/4 - 11:00am	GDH 449

Today

- **Content**: Educational goals
- **Workflow**: Github
- **Engagement**: Swirl

Educational Goals

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Differences between EDM & LA?

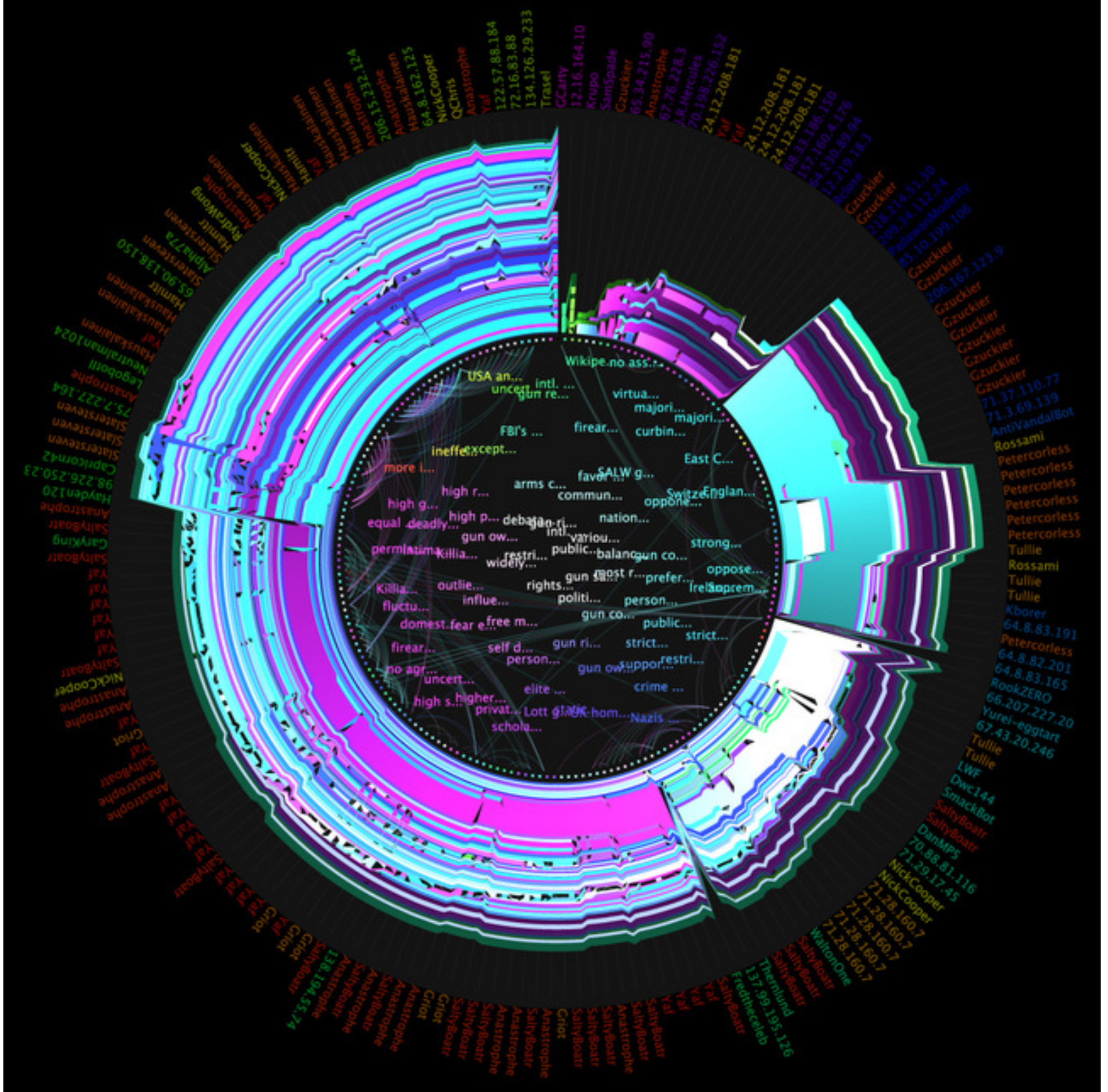
- EDM = rooted in tech field, LA = ed field
- EDM = automation/tech driven, LA = using tech as a tool to enhance human judgement
- Methodological differences EDM = machine learning, LA = text & SNA
- EDM = individual, LA = holistic
- Challenge of integrating the tech and ed

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

People Don’t Agree

- Go to the Wikipedia page for “learning analytics”:
- https://en.wikipedia.org/wiki/Learning_analytics
- Click on “View History”
- Do you see in patterns in the revision history?



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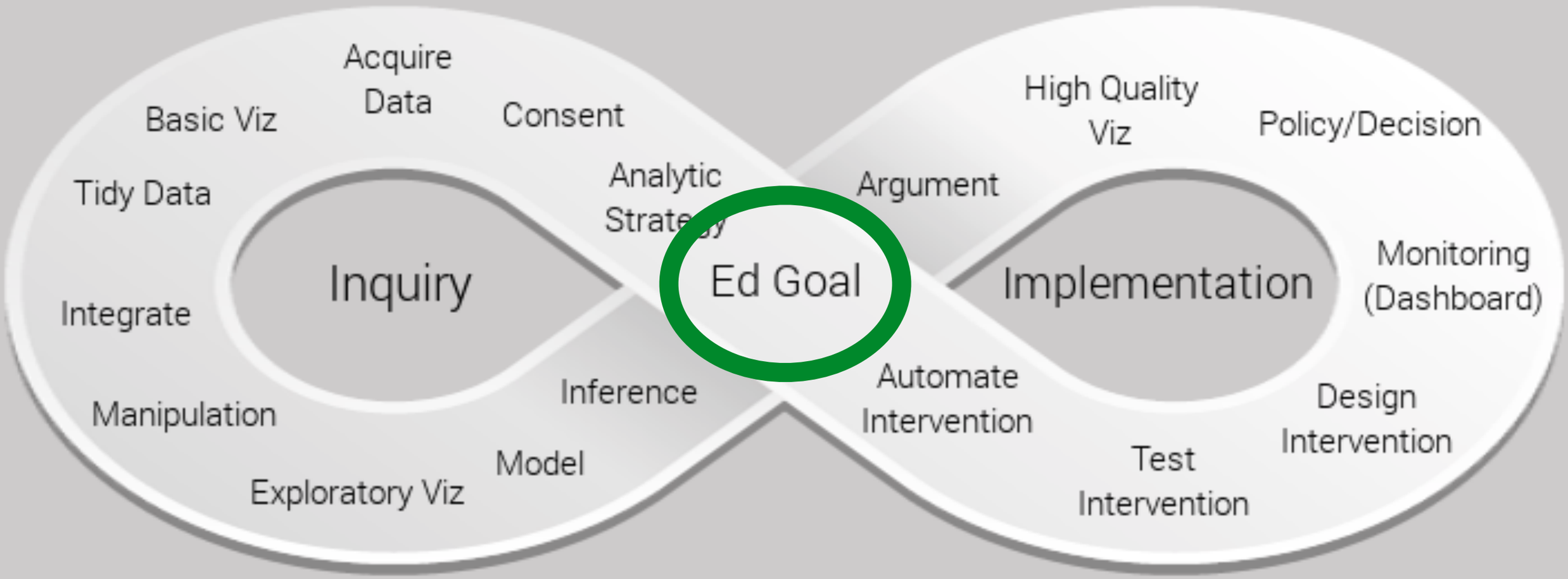
Ed Data Science Cycle



“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. With the person next to you

2. Determine one educational goal that you would like to define for yourself, for this semester

3. What could you count about your goal? How would you process that number? What meaning could you derive from it? What action will you take based on that meaning?

4. Log into your email. Write the goal and count in a new email and schedule the email to be sent to you on December 12, 2019

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

Working Directory

What you see

Add

Staging Area

Commit

Local Repository

Clone

Push

Pull

Remote Repository

Pull Request

Fork

Friend's Remote Repository

Github

Functions

- Open syllabus
- RStudio integration

https://github.com/core-methods-in-edm/syllabus

Github Process

- Log into Github/Create account if needed
- “Fork” core-methods-in-edm/syllabus page to your personal account
- Copy the URL from the cloned repository
- Open RStudio
- Click “File” -> “New Project” -> “Version Control” -> “Git…”
- Paste the URL place the new project in an appropriate folder with an appropriate extension
- Import the repo to your computer
- Click on the “README.md” file in your version
- Find an error or other change you would like to make in the syllabus file and change it
- Save the file
- Click “Git” -> “Commit”
- Mark the box next to the README file that you have changed and make a comment about why you are changing it
- Click “Commit Change”
- Click Pull and then Push
- Return to Github to see that your change has been made to your copy
- Now click on the “Pull Requests” tab and then “New pull request” to request the change be made to the original version

Fork	Commit
Clone	Push
Change	Github
Save	Pull Req

Swirl

1. Open RStudio

2. Install swirl if you have not

3. Load swirl: `library(swirl)`

4. `uninstall_all_courses()`

5. `install_course_github("core-methods-in-edm", "swirl", multi = TRUE)`