UCDAVIS
DataLab
Data Science and Informatics

CURE – Discovering STEM at UC Davis

Employing data science and the digital humanities to improve engagement

Fall 2019 Quarter

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Canvas class site:
FRS 004 018 FQ 2019

UC DAVIS
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Research
Training
Community

»» Increase UC Davis' research impact via data-driven expertise

»» Support the next generation of data-capable researchers and students.

»» Foster and coordinate data-enabled researchers and university units.

Supporting innovation, accelerating research for the entire community.

http://datalab.ucdavis.edu

Research client – STEM Strategies

- Acts on behalf of the Provost, works with senior UC Davis administrators to execute and enhance campus's visibility on STEM related maters regionally and nationally.
- Lead efforts to engage business, industry, and regional stakeholders in supporting equity-driven STEM initiatives across the university, build high quality partnerships that are mutually beneficial and benefit students.
- Convene and collaborate with a work group of senior campus executives, preform an analysis of the current status of UC Davis STEM programs and strategic initiatives, including those represented in the UC Davis STEM portal, with particular attention to actions necessary to advancing a unified, campus wide STEM strategy.

Science Technology Engineering & Math

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OFFICE OF THE PROVOST
STEM Strategies

STEMportal

- Go-to resource for all things STEM related at UC Davis
- Single point of entry
  - place for students of all levels, faculty, parents, teachers, counselors, and industry partners to learn about the wide array of available STEM-related resources at UC Davis
- Updated twice a year
  - Individuals who are involved in STEM activity at UC Davis can submit

Science Technology Engineering & Math

Inclusion criteria for program/activity:

- Must be an established UC Davis program.
- Must be STEM related.
- Must be recurring.

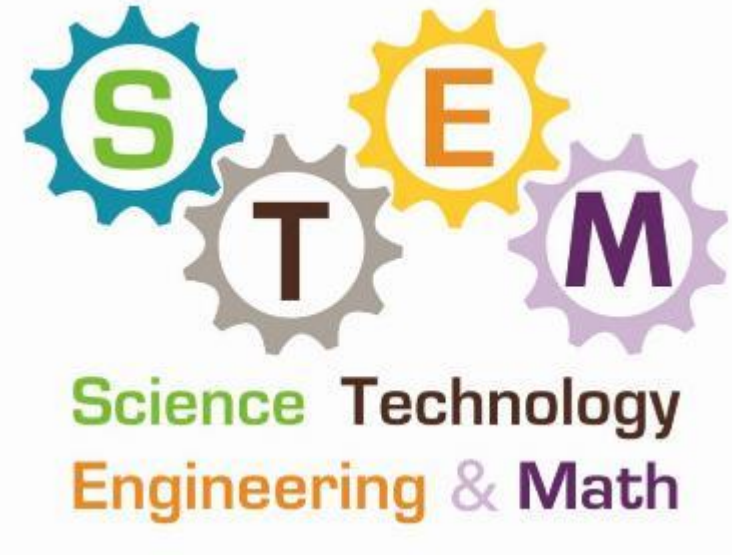
https://stem.ucdavis.edu/

What STEM Strategies wants to know

- What key trends, opportunities and gaps can we identify? What action should we take with this information?
- Do our collective efforts meet the needs of our current and future students?
- What design changes should be made during the next to maximize the potential for best and highest use?

Research plan

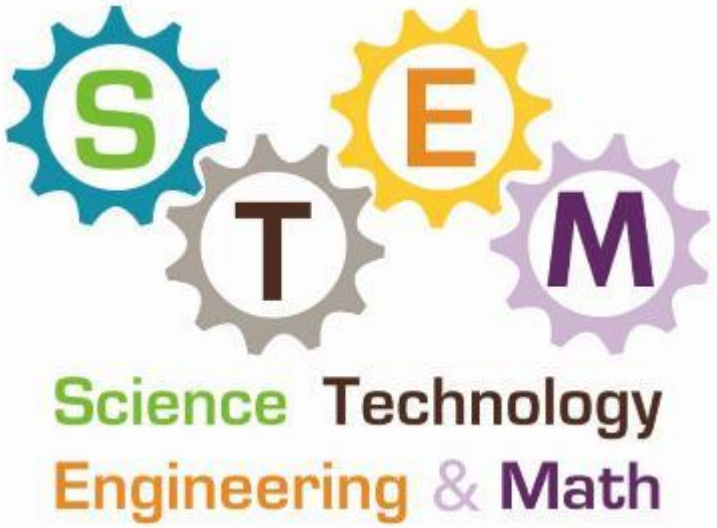
- Characterize and compare the discourse surrounding STEM at UC Davis
- Webscrape UC Davis' websites to develop a university corpus for STEM
- Employ natural language processing and techniques in the digital humanities to interrogate this corpus and identify themes and gaps



Activities

- Participation
- Report
- Presentation

For details see the syllabus on Canvas.



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Homework for next week (October 8)

- Explore STEMportal. Think about how we could go about discovering what about STEM at UC Davis the Portal is – and isn't – capturing.
- Submit through the Canvas assignment 3 candidate "landing page" urls of ucdavis.edu websites that link to multiple STEM related departments, activities, etc. We will discuss these to pick how we'll focus our webscraping activities.
  - For example, this is one site we'll use: https://www.ucdavis.edu/academics/academic-departments/
- Setup your computing environment. Download the free software:
  - https://www.r-project.org/
  - https://rstudio.com/

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