Fall 2023

I590: Data Visualization (Topics in Informatics)
Introduction

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Instructor

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https://soda-labo.github.io/

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Educational speed dating (3 mins * multiple sessions)

1. Your name
2. Your background (e.g. Major) and why you are interested in this course.
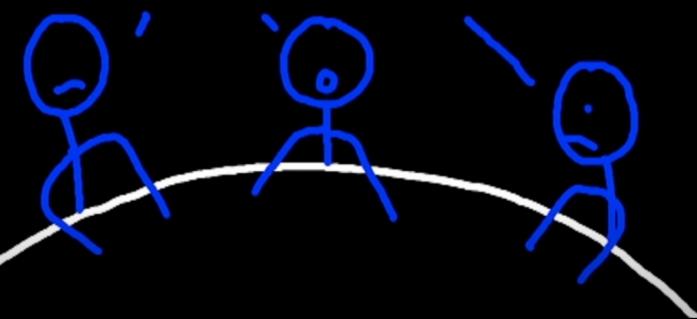3. Some fun facts about yourself

Veritasium ✓

@veritasium 14.1M subscribers 370 videos

An element of truth - videos about science, education, and anything else I ... ›
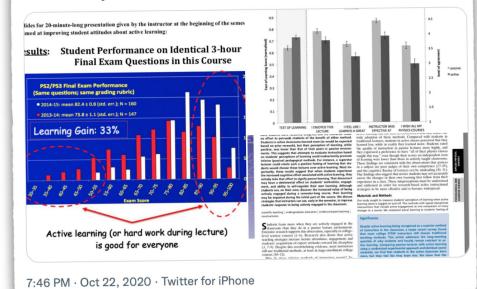
Active learning

Ethan Mollick ✓
@emollick

😱 An experiment at Harvard showed active learning upped test scores by 33%… but students thought they were learning more from non-active lectures. The problem: being challenged is the key to learning BUT we hate challenges, they are hard & make you realize how little you know.

7:46 PM · Oct 22, 2020 · Twitter for iPhone

Canvas

Materials

Assignments

Discussions

…

Email

Syllabus

Fall 2023

Home

Announcements

Syllabus

Modules

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People

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Reports & Dashboards

IU Libraries

SIS Faculty Center

Questionnaire

Course Syllabus

<kbd>✎ Edit</kbd>

INFO-I590: DATA VISUALIZATION (TOPICS IN INFORMATICS)

Fall 2023 - TuTh 4:45 PM–6:00 PM, IF 0117

Teaching Team

Instructor

- Haewoon Kwak hwkwak@iu.edu

AIs

- Sain Raj sainraj@iu.edu
- Saiabhinav Chekka schekka@iu.edu
- Manasa Gudise mgudise@iu.edu
- Jaydeep Amratbhai Patel jp157@iu.edu
- Divya Dhaipullay ddhaipul@iu.edu

What we will learn

This introductory course delves into the **core concepts of statistical data analysis and visualization**. Participants will explore the foundations of data visualization, covering topics such as perception, integrity, design principles, statistical methods, data classifications, and various visualization techniques. Through hands-on exercises utilizing the Python stack, students will develop practical skills in data processing and visualization.
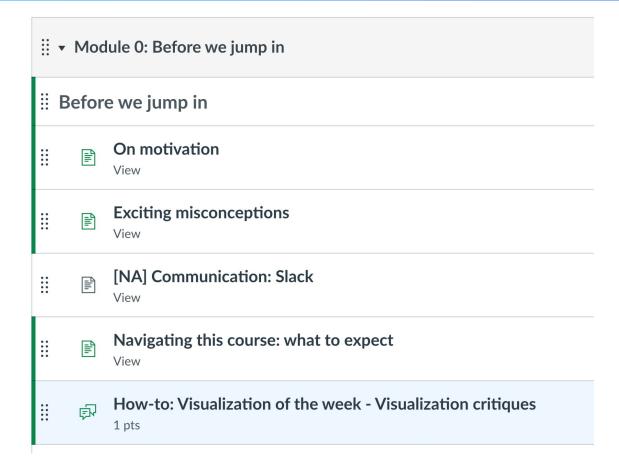
Prerequisites

Because producing visualizations using Python data & visualization stack is an integral part of the course, it is required to have **<u>a good understanding and working knowledge of programming (esp. Python)</u>**, as well as working knowledge of using open-source libraries. It is also recommended to have a basic understanding of mathematics, statistics, and the Web (HTML, CSS, Javascript, and JSON).

Grading

- Attendance, Quiz, Participation, Visualization critiques: 15%
- (Weekly) Assignments: 20%
- Exam: 25%
- Team project: 40%
  - Proposal presentation: 10%
  - Final presentation: 15%
  - Final report: 15%

Visualization critiques

Module 0: Before we jump in

Before we jump in

On motivation
View

Exciting misconceptions
View

[NA] Communication: Slack
View

Navigating this course: what to expect
View

How-to: Visualization of the week - Visualization critiques
1 pts

(Weekly) assignments

- Mostly Python programming (Jupyter notebook)
- You will submit two files for programming assignments:
    - Original Jupyter notebook file
    - HTML file (exported)
- Check "Assignment submission FAQs" (Week 1 @ Canvas)

Key dates

No class: 5 September (to sync up with the other class)

Project proposal presentation: 10 Oct in class

Exam: 14 Nov in class

Final presentation video upload: 11:59 PM, 3 Dec (Sun)

Final report submission: 11:59 PM, 10 Dec (Sun)

Team project

Team: 4 students / you can freely choose your teammates.

Topic: No restriction; but some examples are

- Data analysis
- Revelatory data visualization
- Explanatory visualization

See https://github.com/yy/dviz-course/wiki/Projects but deliverables are different.

https://specials.idsnews.com/car-crash-dashboard-monroe-county/

Any questions?