

# VISUALIZATION TECHNOLOGIES 2: ADVANCED PRACTICES

## ARTG 5430

Spring 2020 Semester  
Thursdays 6:00–9:30  
Ryder Hall 399A

## INSTRUCTOR

Dave Landry  
d.landry@northeastern.edu

## COURSE DESCRIPTION

Builds on the foundational skills acquired in ARTG 5330. Introduces students to intermediate-to advanced-level topics in web-based interactive visualization. Focuses on building greater proficiency in working with d3 and related JavaScript libraries and on acquiring knowledge of best practices and common patterns in data visualization problem solving. Through lectures, workshops, and a final project, the class offers students an opportunity to learn to effectively deploy their data visualization skills to explore and extract understanding from data in a critical and productive way.

## SCHEDULE

After refreshing the foundational skills acquired in ARTG 5330, each class in the first part of the semester will focus on a selection of widely used concepts for creating engaging interactive web visualizations. After that foundational work, each student will begin creating an individual data narrative. From that point forward, class lectures will be structured around critiquing eachothers projects to help iterate each individual design, followed by in-class guided coding. As needed, lectures on any additional “on demand” concepts that each unique project might require may occur.

01.09 – Github and Revisiting HTML/SVG/CSS/JS  
01.16 – Data, Manipulation, and APIs  
01.23 – Realtime APIs and Advanced JavaScript  
01.30 – Timelines, Toggles, and Scrolling  
02.06 – SVG Text and Label Positioning  
02.13 – TopoJSON, Tiles, and Zooming  
02.20 – Color, Legends, and Scales  
02.27 – Cross-Browser Idiosyncrasies  
03.05 – SPRING BREAK  
03.12 – Project Pitches and Workshopping  
03.19 – Dataset Critiques and Ideation  
03.26 – Prototype Review  
04.02 – Narrative Review  
04.09 – Mock-Critique and Final Goalsetting  
04.16 – Final Presentations/Critique  
04.23 – FINAL PROJECTS DUE

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## **TECHNOLOGY**

Students are expected to bring their own personal laptop to each class, which we will be setting up as their programming environment.

## **FINAL PROJECT**

Using a dataset of their choosing, students will be creating a visualization narrative that must:

- guide users to gain an insight from the selected dataset
- animate at least 1 visualization via user interaction
- include at least 3 sentences of data-driven text description

Projects will be graded on implementation, design, and the overall narrative of the page.

## **GRADING**

Final grades are calculated as a weighted average between the final project (70% weight) and the average of all homework assignments (30% weight).

Final project grading and homework assignment grading are both based on rubrics that will be discussed in class when first assigned. At any point during the semester, students may e-mail the instructor to receive their current grade based on time elapsed.

## **ATTENDANCE POLICY**

Presence in class is mandatory, and only one unexcused absence is allowed. Any other unjustified absences will result in the dropping of half a letter grade from the student's final grade.

## **ONLINE RESOURCES**

All of the class slides, code references, and resources are hosted at the following URL:

- <http://www.dave-landry.com/classes/artg5430-spring2020/>

Students are also encouraged to participate in a group chat set up by the instructor on Gitter. In addition to sharing ideas and helping each other, the instructor will be checking the board periodically throughout each week to answer any of the trickier questions:

- <https://gitter.im/NEU-ARTG5430-Spring-2020/community>