Data stories

with The Pudding
Data academia & data science

- dense
- complex
- static/non-interactive
- often not accompanied by an easy-to-follow narrative
Data art

- beautiful
- abstract
- compelling
- complex
Data storytelling

Data academia & data science

Data art
Data stories

with The Pudding
How did we get where we are today?
John Snow’s Cholera map

Florence Nightingale’s rose chart

Charles Joseph Minard’s march diagram
It is a term with broad meaning. The name is derived from the Cascade Tunnel, originally a 2 6-mile railroad tube completed in 1906 that connected the east and west sides of the Cascades, a boon for the growth of Seattle and Puget Sound. The mountain pass that it burrowed beneath was named for the project’s engineer, John F. Stevens, who later helped build the Panama Canal.

In late February 1910, ceaseless snowstorms over several days marooned two passenger trains just outside the tunnel’s west portal. Before the tracks could be cleared, the trains were buried by what still stands as the nation’s deadliest avalanche. It killed 96 people.

Snowfall, The New York Times
Popular male NBA names
Per 100,000 males

Increases in the federal minimum wage
1978-2016

Jan Diehm/The Guardian (unpublished)
What does a data story look like now?
Scrollytelling

- **Twenty Years of the NBA Redrafted**
  *The Pudding*

- **Going Gray**
  *Reuters*

- **Here’s How America Uses Its Land**
  *Bloomberg News*
Microstories

- **Data illustrations**  
  *Mona Chalabi*

- **Dear Data**  
  *Giorgia Lupi and Stefanie Posavec*

- **The Daily Chart**  
  *The Economist*
Non-traditional

- **Apollo 11: As They Shot It**
  *The New York Times*

- **Concussion Protocol**
  *Josh Begley*

- **Borderline**
  *The Washington Post*
Explainers

- **Parable of the Polygons**  
  *Vi Hart and Nicky Case*

- **How To: Tune a Guitar**  
  *Matthew Conlen and Alex Kale*

- **Let’s Learn about Waveforms**  
  *The Pudding*
Data stories

with The Pudding
How do you find stories?
Question first

Data second
Where do your questions come from?
The bad news

The good news
How do you make sure your idea is interesting?
Sparks intense debate or discussion

Gently pitch the idea to others and get feedback

Trust your instincts
I'm a cool dad. That's my thang.
What types of stories make for successful data stories?
MODULE 6 | VIDEO 3

👍 Works

- DATA!
- Universal truths
- Visuals help communicate the story
- Question driven

👎 Doesn’t work

- Highly personal
- Stuff that “boils the ocean”
- Too obvious - “water is wet”
1. Question
2. Data
3. Storyboard
4. Design
5. Development
2. Data

3. Storyboard
4. Design
5. Development
R programming
Python
Node.js
QGIS
MySQL
Google Sheets/Excel
1. Questions
2. Data
3. Storyboard
4. Design
5. Development
Small to big

1. Broad picture/overarching trend
2. Secondary facts that support the story
3. Hyper specific details

Big to small

1. Hyper specific details
2. Secondary facts that support the story
3. Broad picture/overarching trend
4. Design

5. Development
Visual vocabulary

Designing with data
Module 6 | Video 3

- Google sheets
- Flourish
- QGIS
- Observable
3 questions for creating a chart

Chartable blog, Datawrapper

1. What's your point?
   - Headline

2. How can you emphasize your point in your chart?
   - Chart type, data, color, highlights, annotations

3. What does the final chart show exactly?
   - Description, legend/keys, source
After dissecting the joke, what we found is that it has a lot to do with form—the structure of the entire routine.

Our mission was to understand the laughter climax, so we started at that moment.

Form made the jokes funnier.

In fact, the moment had the most laughter of any the entire routine.

We called it the laughter climax.

The big laugh is about conception. We worked out our way backwards, looking for a starting point.
I HATE DOORS!
5. Development

1. Questions
2. Data
3. Storyboard
4. Design
MODULE 6 | VIDEO 3

HTML 5

CSS 3

JS 5

+ DB
Data stories

with The Pudding
Spend the majority of time crafting the story.
hyphenated-names-viz

JavaScript  MIT  0  0  0  0  Updated on May 10

hyphenated-names

HTML  MIT  0  2  1  0  Updated on May 10
It’s equally important to show as tell.
Show + Tell = Powerful connection
Know how your audience interacts with your piece.
• Although a lot of readers may never interact with your piece, the most loyal will

• They allow readers to dig deep and explore the full dataset

• They can pull back the curtain, making data more transparent and trustworthy

• And they can add whimsy and personal connections to your story
Embrace the ‘littles of visualization design.’
Orientation assistance or mini maps
Knowing when to buy your plane tickets for any trip can be stressful. Let us help with that. Check out the price trends from the last year for the most common flight routes to find how many days before travel you should be thinking about buying that ticket.
Fading small values
Seamless help

We’re going to explain why her hour-long routine is so great.

But first, know that you can click on the right to skip forward. Or use the keyboard. < ≥
HOW IT WORKS

This chart shows over 600k attempts of people trying to search for Britney Spears. Here are the 8 most common permutations of her first name, Britney. Of those, people nail the first three letters —then things get interesting.

YOUR TURN

Below we’ll put you through a series of tests. You can skip ahead if you just want to see the results, but be warned, once you do there is no turning back!
Have fun!
play-by-play data reveals that defensive three seconds is the NBA's least consistently called rule.
Condoms and The Pill are Go-To’s

For many people, finding a contraceptive method that fit their body and lifestyle took a few tries. Devon, 27, has tried 6 different methods and is still looking for a good fit. The average respondent has tried between 3 and 4 different methods in their lifetime. Since the survey did not ask respondents if they have switched between different types of the same method (e.g., different brands of birth control pills or between the copper and hormonal IUDs), this average may be an underestimate. Still, some methods are more common to try than others. By far the most common methods are condoms and The Pill.

Types of Birth Control Used (Ever)
BASED ON SURVEY RESULTS

- Condom: 92%
- The Pill: 79%
- Withdrawal: 60%
- Depo-Provera: 27%
- Emergency Contraception: 16%
- Calendar Method: 16%
- Tubal Ligation: 15%
- Patch: 12%

PSSTT! I'M HERE TO HELP.
Click on any type of birth control in the graphics or test and I'll tell you what it is.
Get it!
## Average of Album’s Track Lyrics That Are Emo

*emo words = lyrics strongly associated with the emotion sadness and fear.

<table>
<thead>
<tr>
<th>Emo Bands + Other Rock</th>
<th>Emo Lyrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>MY CHEMICAL ROMANCE: THE BLACK PARADE</td>
<td>22% Emo</td>
</tr>
<tr>
<td>THE USED: IN LOVE AND DEATH</td>
<td></td>
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<tr>
<td>TAKING BACK SUNDAY: TILL ALL YOUR FRIENDS</td>
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<tr>
<td>RADIOHEAD: HIGH AND DRY</td>
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<td>TWENTY ONE PILOTS: VESSEL</td>
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<td>SAVES THE DAY: STAY WHAT YOU ARE</td>
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<td>STRAYLIGHT RUN: STRAYLIGHT RUN</td>
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<tr>
<td>FALL OUT BOY: FROM UNDER THE CORK TREE</td>
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<td>SUNNY DAY REAL ESTATE: DIARY</td>
<td></td>
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<td>DASHBOARD CONFESSIONAL: TYPHOON</td>
<td></td>
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<tr>
<td>THE SMITHS: QUEEN IS DEAD</td>
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<tr>
<td>AMERICAN FOOTBALL: AMERICAN FOOTBALL</td>
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<tr>
<td>PANIC AT THE DISCO: A FEVER YOU CAN’T SWEAT OUT</td>
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<tr>
<td>JIMMY EAT WORLD: BLEED AMERICAN</td>
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<tr>
<td>BRAID: FRANK CARVINS</td>
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<table>
<thead>
<tr>
<th>Other Hip Hop + Emo Rap</th>
<th>Emo Lyrics</th>
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<tbody>
<tr>
<td>REAPER NOTHING, NOWHERE</td>
<td>8% Emo</td>
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<tr>
<td>30XXTEENTACION: GOODBYE &amp; GOOD RIDDANCE JUICE WRLD</td>
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<tr>
<td>YI RAMTE: LIFE’S A TRIP TRIPPIE REED</td>
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<tr>
<td>A GIRL CRIED RED: PRINCESS NOKIA</td>
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<tr>
<td>COME OVER WHEN... LIL PEEP</td>
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<td>RBS KANTE</td>
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<tr>
<th>Strangers Tung Lean</th>
<th>Emo Lyrics</th>
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</thead>
<tbody>
<tr>
<td>NASTY RICO NASTY: TRILLOLOGY</td>
<td></td>
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<tr>
<td>THE WEEKEND: MAN ON THE MOON II: THE DAY AFTER</td>
<td></td>
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<tr>
<td>KISSDINGO POST MALONE: LE VIRT</td>
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<tr>
<td>LIL UZI VERT: V4L2 FUTURE</td>
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<tr>
<td>BEAUTIFUL THUGGER... YOUNG THUG</td>
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<tr>
<td>FADER BOY: TYLER THE CREATOR</td>
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<tr>
<td>CULTURE: MIGOS</td>
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<tr>
<td>COLLEGI Dropout KANTE</td>
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<tr>
<td>LIL PUMP: LIL PUMP</td>
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1% Emo

Least Emo Lyrics
Republican themed constellations
See our state-by-state delegate count tracker
Explore more coverage of the 2016 presidential election

### Iowa

#### DEMOCRATS

**Statewide results**

- Hillary Clinton: 201
- Bernie Sanders: 191
- Martin O’Malley: 8
- Uncommitted: 0 (0.0%)
- Other: 0 (0.0%)
- Total votes: 1,406

#### REPUBLICANS

**Statewide results**

- Ted Cruz: 51,666 (27.6%)
- Donald Trump: 45,427 (24.3%)
- Marco Rubio: 43,165 (23.1%)
- Ben Carson: 17,395 (9.3%)
- Rand Paul: 8,481 (4.5%)
- Jeb Bush: 6,238 (3.4%)
- Carly Fiorina: 3,485 (1.9%)

*Football is a spectator sport. Democracy is not a spectator sport.*
Data stories

with The Pudding
Pockets

- Starts with a question
- Big to small narrative
- Scrollytelling
- No traditional charts
- Whimsical design elements
Hyphenated last names

- Starts with a question
- Big to small narrative
- No traditional charts
- Animation
Colorism in Vogue

- Starts with a question
- Scrollytelling (x2)
- Animation
Why is experimentation important?
● If no one broke the rules, data viz would be boring
● Keeps the readers (and us!) interested
● Doesn’t limit the storytelling by the delivery
● Experiments add to the whole industry’s toolkit
How do you know when to break the rules?
👍 When to break
- There’s a better way to tell the story
- If the story is more light hearted
- For a connection with the reader

👎 When to follow
- You’re at risk of deceiving the reader
- There are already heavily ingrained patterns
Building sankey-ish diagrams
play-by-play data reveals that defensive three seconds is the NBA’s least consistently called rule.

Rendering code to video and building an off-platform experience
Using the entire page as a chart, variable thickness band charts, and audio narration triggers.
Cities with at least 5 breweries within 20 miles based on all beers.

**BEST CITIES**
1. Santa Rosa, CA
2. San Diego, CA
3. Denver, CO
4. Anchorage, AK
5. Portland, OR
6. Minneapolis, MN
7. Chicago, IL
8. Ann Arbor, MI
9. St. Louis, MO
10. Salt Lake City, UT
11. Bend, OR
12. Austin, TX
13. Frederick, MD
14. Albuquerque, NM
15. Oceanside, CA
16. New York, NY
17. San Francisco, CA
18. Richmond, VA
19. Seattle, WA
20. Washington, DC
21. Duluth, MN
22. Asheville, NC
23. Madison, WI
24. Columbus, OH
25. Dallas, TX

**TOP BREWERIES**
- Russian River Brewing
- Bear Republic Brewing Company
- Shady Oak Barrel House
- Moonlight Brewing Company
- Cooperage Brewing Company
Speedruns
Political fonts
Florida man arrested, accused of shoving woman to get to egg rolls

Naked Florida man starts house fire after baking cookies on George Foreman grill
Throwing food, sex for chicken nuggets and other area Florida man and woman arrests
Florida man charged in naked rake attack

Hot sauce saves Florida man after car crashes into Taco Bell

Florida Man claiming people were "eating his brains" leads police on insane golf course chase

Florida man who attacked McDonald's worker over straw sentenced to jail

Predictably, Florida Man Blows Off Part of His Hand in July 4th Fireworks Accident

Police: Florida man wrecks liquor shop, blames "caterpillar"

Florida man caught trying to steal ice cream truck

Florida man breaks into store, flips off security camera, deputies say

Thrown pancake batter leads to battery charges for Florida man

Oh, Florida Man. Playing policeman never ends well for you

Shirtless Florida man travels to Myrtle Beach to head bang during Hurricane Florence

Florida man makes beer run with alligator in hand, wildlife officials investigating
That’s a wrap!

- Don’t forget to participate in the discussion forums and quizzes
- Also be sure to check out the Facebook group for this course
- If you have any questions for me post them in the “Questions for the instructors forum”
- Post questions related to the course platform in the “Questions about the course platform”
www.pudding.cool

- Twitter: @puddingviz
- Instagram: the.pudding