

DATA VISUALIZATION

AUSTIN LYONS
DES MOINES WEB GEEKS

VIEW ON GITHUB
[GITHUB.COM/AUSTINLYONS/DATAVIZ-SLIDES](https://github.com/austinlyons/dataviz-slides)

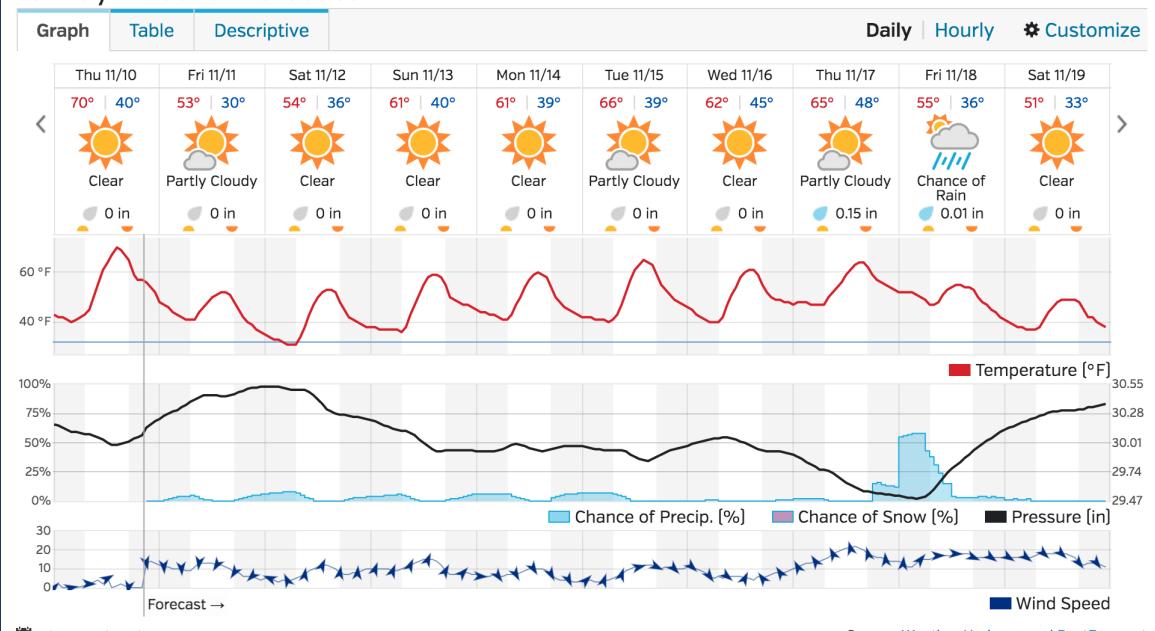
OUTLINE

- Data Visualization Overview
- dc.js
- Beer Consumption Visualization
- Hands On Time

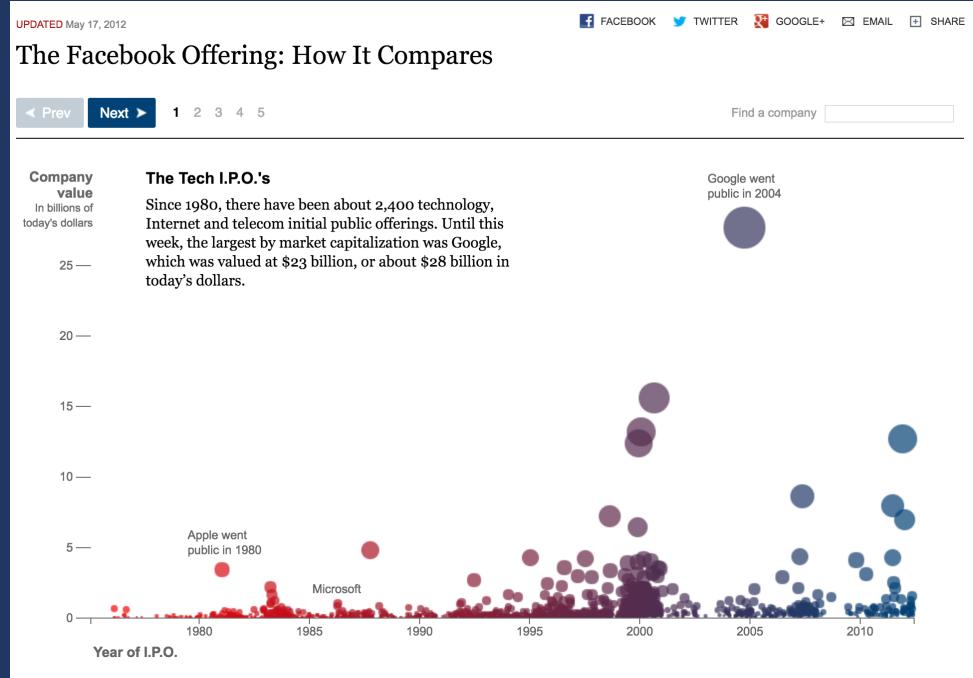
WHAT?

VISUAL COMMUNICATION OF DATA

10-Day Weather Forecast







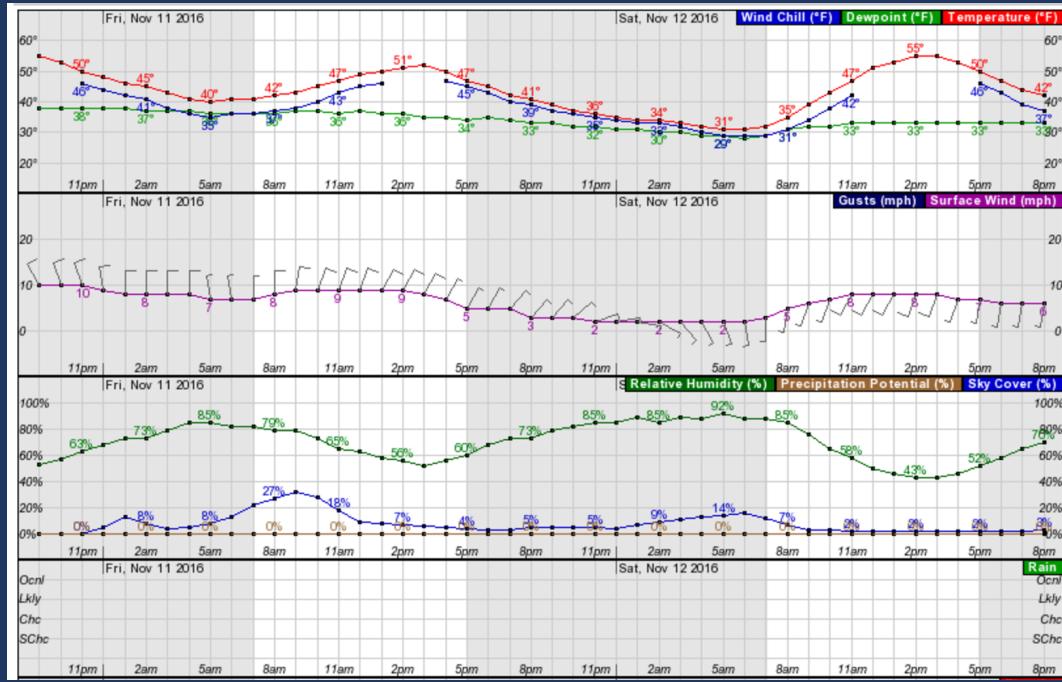
NYT: FACEBOOK IPO

WHY?

- Unleash the human brain!
- Gain insight quickly
- Communicate a story

Date	11/10					11/11																			
Hour (CST)	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	
Temperature (°F)	55	53	50	48	46	45	43	41	40	41	41	42	43	45	47	49	50	51	52	50	47	45	42	41	
Dewpoint (°F)	38	38	38	38	37	37	37	36	36	36	36	37	37	36	37	36	36	35	35	34	35	34	33		
Wind Chill (°F)					46	44	42	41	38	36	35	36	36	37	38	40	43	45	46		47	45	43	40	39
Surface Wind (mph)	10	10	10	9	8	8	8	7	7	7	8	9	9	9	9	9	9	9	8	7	5	5	5	3	
Wind Dir	NNW	NNW	NNW	N	N	N	N	N	N	N	N	N	N	NNE	NE	NE									
Gust																									
Sky Cover (%)	0	0	0	5	13	8	4	5	8	13	22	27	32	28	18	9	8	7	6	5	4	3	3	5	
Precipitation Potential (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Relative Humidity (%)	53	57	63	68	73	73	79	85	85	82	82	79	79	73	65	63	58	56	52	56	60	68	73	73	
Rain	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Thunder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Snow	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Freezing Rain	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sleet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Date	11/12																								
Hour (CST)	21	22	23	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	
Temperature (°F)	39	37	36	35	34	34	33	32	31	31	32	35	39	43	47	51	53	55	55	53	50	47	44	42	
Dewpoint (°F)	33	32	32	31	31	30	30	29	29	28	29	31	32	32	33	33	33	33	33	33	33	33	33	33	
Wind Chill (°F)	37	36	35	34	33	33	32	30	29	29	29	31	34	38	42						46	43	39	37	
Surface Wind (mph)	3	3	2	2	2	2	2	2	2	2	3	5	6	7	8	8	8	8	7	7	6	6	6		
Wind Dir	NE	NE	ENE	E	E	ESE	SE	SSE	SSE	S	S	S	SSW	S	S	S	S								
Gust																									
Sky Cover (%)	5	5	5	4	7	9	11	13	14	16	12	7	3	3	2	2	2	2	2	2	2	2	2	3	
Precipitation Potential (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Relative Humidity (%)	79	82	85	85	89	85	89	88	92	88	88	85	76	65	58	50	46	43	43	46	52	58	65	70	
Rain	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Thunder	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Snow	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Freezing Rain	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sleet	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

DRIVING A POINT HOME



MUCH BETTER

What Makes A Good Data Viz?

see this graphic

- Information
- Story
- Goal
- Visual Form

HOW?

- Tool depends on use case
- Most tradeoffs happen between creator and consumer

TOOLS SPECTRUM EXAMPLE

- Excel Charts
- Google Spreadsheet Charts
- Web Browser (JS + HTML + CSS)

D3.JS

- Data-Driven Documents
- JavaScript API
- SVG, HTML, CSS
- Powerful but has a learning curve (think Photoshop)

Amazing Example of D3

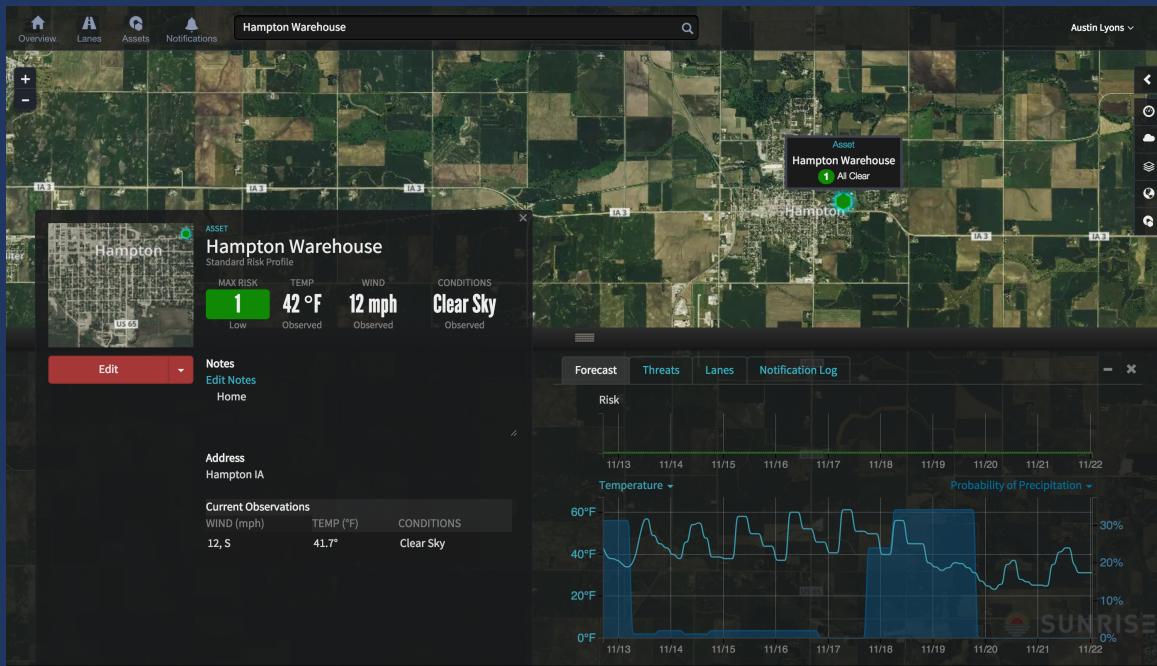
DC.JS

Built on d3 - easier API for common charts

LINE CHART EXAMPLE

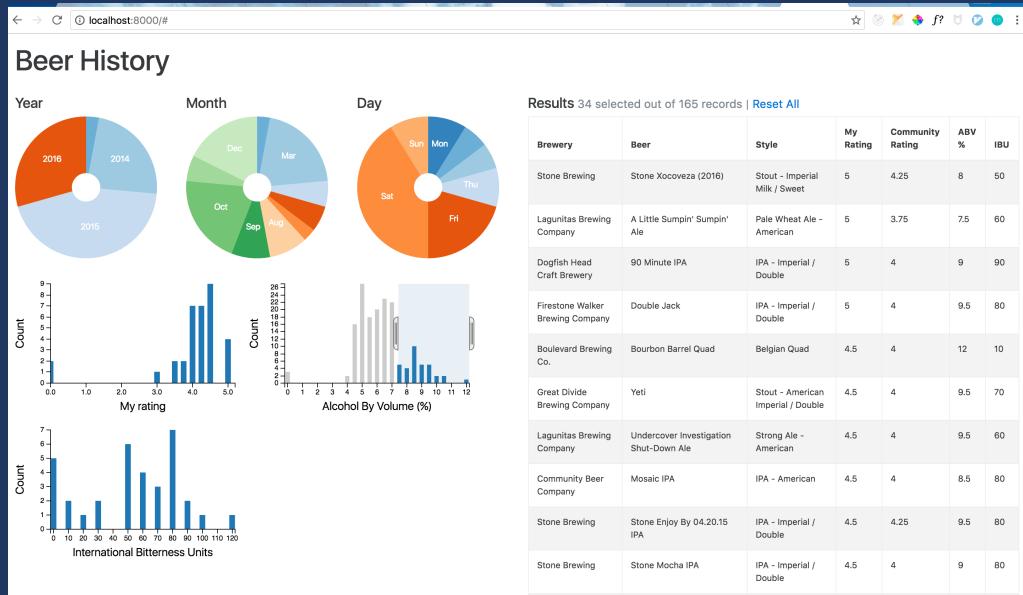
- Chart
- Data
- Code

LINE CHART IN THE WILD



RISKPULSE FORECAST CHART

BEER DATA VIZ



SIMPLER CODE
TUTORIAL ON GITHUB

THESE SLIDES ARE HOT-RELOADING A REACT APP!
The button has been clicked 0 times

CLICK ME!

ASYNC SLIDES - SPACE SUBREDDIT

Fetch!

SPECTACLE

- Version control your slides
- PDFs
- Presenter mode

TRY IT OUT

BEER DATA VIZ

- add a community rating chart
- beautify / update styles
- text mining of beer descriptions in beers.json

OTHERS

- dc.js docs & examples
- slides source code

QUESTIONS?

THANKS!