**HONORS** February 28, 2019 • Wade Fagen-Ulmschneider

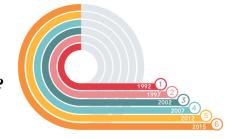
#### Welcome to Data Structures Honors: A Data-centric Dive into Data Science

Course Website: <a href="https://courses.engr.illinois.edu/cs225/sp2019/pages/honors/">https://courses.engr.illinois.edu/cs225/sp2019/pages/honors/</a>
...or from the CS 225 Website -> "Course Info" -> "Honors Section"

### **Edward Tufte's Thoughts on Color**

- "Above all, do no harm"
- "Make it right in black and white"

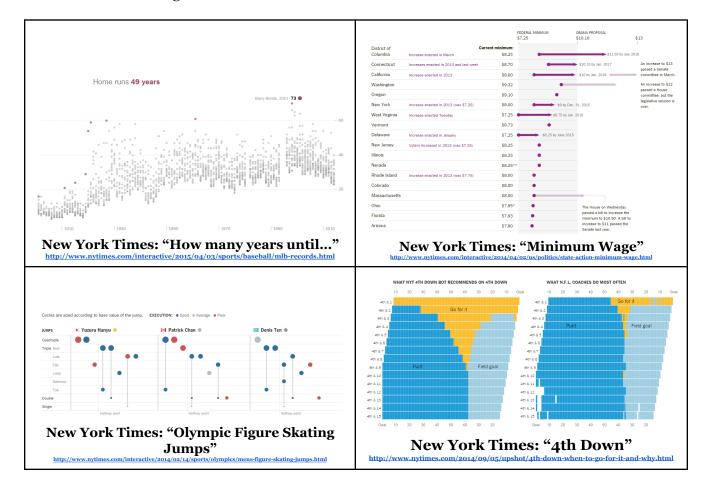
Q: How was the use of color in collegeillinois.org graphic?



### **Visualization: Examples**

As we view each of them, consider:

- What visual encodings are used?
- What pre-attentive features are used?
- Was it "made right in black and white?"



## **Exploratory Data Analysis (EDA)**

Idea: Explore the data quickly to find a story to tell.

- Visualizations are a great tool for EDA!
- **Box plots** are one of my (new) personal favorites for doing this work!

#### **Box Plots:**

Box plots provide extremely detailed summary information in an easy-to-read visualization:

- Every detail of a box plot has a **very precise** technical meaning.
- Importantly, box plots can be created quickly with Python (one-liner!)

		-	0
Q1:			
Q2:			
Q3:			
IQR:			
Outliers:			

# Illinois Dataset: Academic and Administrative Appointments (Gray Book)

As a publicly-supported (tax-payer) institution, faculty at The University of Illinois are State of Illinois employees. The University publishes an annual "graybook" that provides the base salaries paid to every State of Illinois employee: <a href="https://www.bot.uillinois.edu/resources/gray\_book">https://www.bot.uillinois.edu/resources/gray\_book</a>

Tina Abrahan and Wade Fagen-Ulmschneider scraped and cleaned this dataset, which you will explore as part of Homework #3:

<b>Employee Name</b>	Acedemic Title	Previous Salary	Salary	•••
Jones, Robert J	PROF	\$649,000.00	\$661,980.00	