

Lab: Hand-drawn viz

Some (all?) of the visual attributes we have to play with

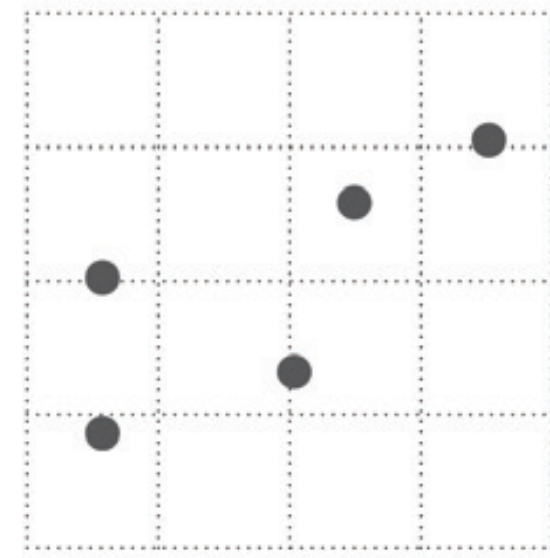
	<i>Points</i>	<i>Lines</i>	<i>Areas</i>	<i>Best to show</i>
<i>Shape</i>		<i>possible, but too weird to show</i>	<i>cartogram</i>	<i>qualitative differences</i>
<i>Size</i>			<i>cartogram</i>	<i>quantitative differences</i>
<i>Color Hue</i>				<i>qualitative differences</i>
<i>Color Value</i>				<i>quantitative differences</i>
<i>Color Intensity</i>				<i>qualitative differences</i>
<i>Texture</i>				<i>qualitative & quantitative differences</i>

Visual cues

When you visualize data, you encode values to shapes, sizes, and colors.

Position

Where in space the data is



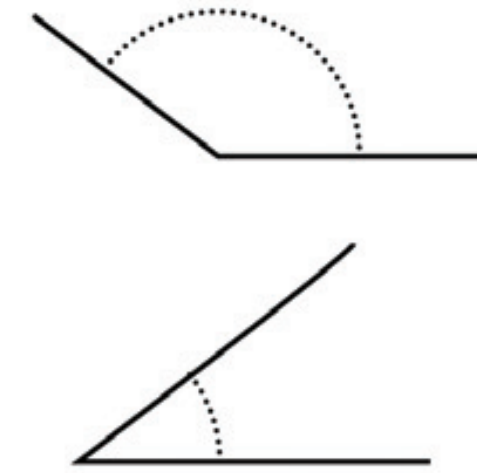
Length

How long the shapes are



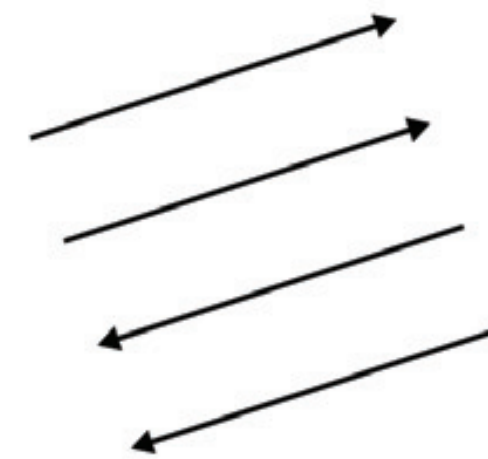
Angle

Rotation between vectors



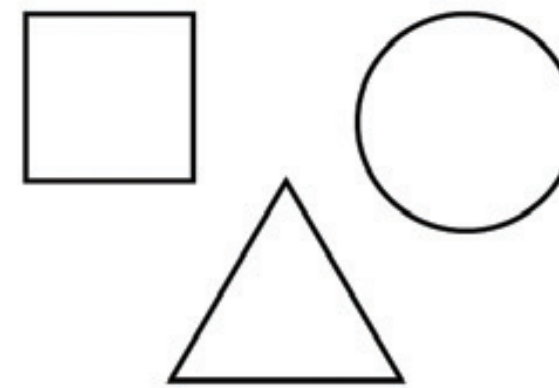
Direction

Slope of a vector in space



Shapes

Symbols as categories



Area

How much 2-D space



Volume

How much 3-D space



Color saturation

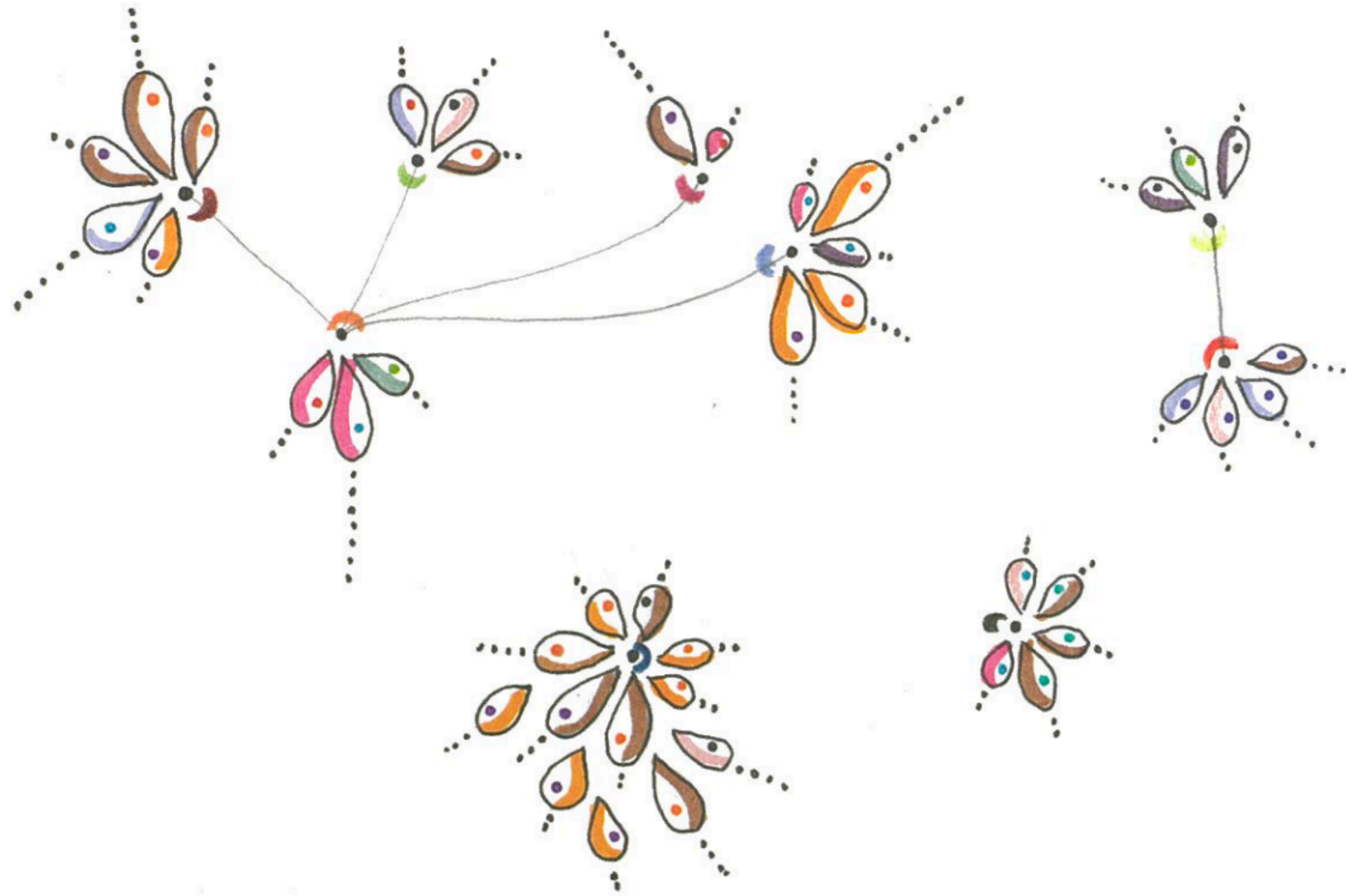
Intensity of a color hue



Color hue

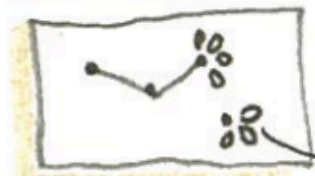
Usually referred to as color





Dear Data
WEEK 38 negative thoughts ::

HOW TO READ IT?



this week I tracked every negative and pessimistic feeling I had - especially regarding future situation
 → Every "petal" (or TEAR ::) is 1 thought, grouped by "TYPE" of feeling

the DIMENSION OF THE element is the level:

- painful
- very painful
- want to cry

the DOTS indicate the DURATION:

- lasted less than 30 mins ..
- lasted less than 1 hour
- lasted for a while

Dear Data related

me back to Italy

work related

my health

other

COLOR = ABOUT WHAT?

- Gabriele back to Italy
- me here alone

DOT COLOR = WHY?

- feeling there's no enough time
- don't wanna be sick
- don't know how to be alone ::
- will miss him
- feeling I am not in control
- feeling things are not ok
- want to stop waiting for something
- other

- anxiety
- pessimism
- fear
- generic sadness
- preoccupation
- frustration
- panic
- disappointment
- irritation

THE CONNECTED FEELINGS MEAN I SOMEHOW ASSOCIATE THE SENSATION THEY GIVE ME!

from: Georgia Lupi
~~Brooklyn~~
 BROOKLYN
 - NY -

NO STAMP!

SEND TO:
 STEFANIE POSAVEC
~~London~~
 LONDON
 - UK -
 ENGLAND

While trying to classify her negative feelings as they showed up, Georgia found it incredibly hard to grasp them and discern the very reason she was feeling blue. This was the most insightful revelation of the week.

Dataset options (or, find your own!)

St Thomas student body diversity

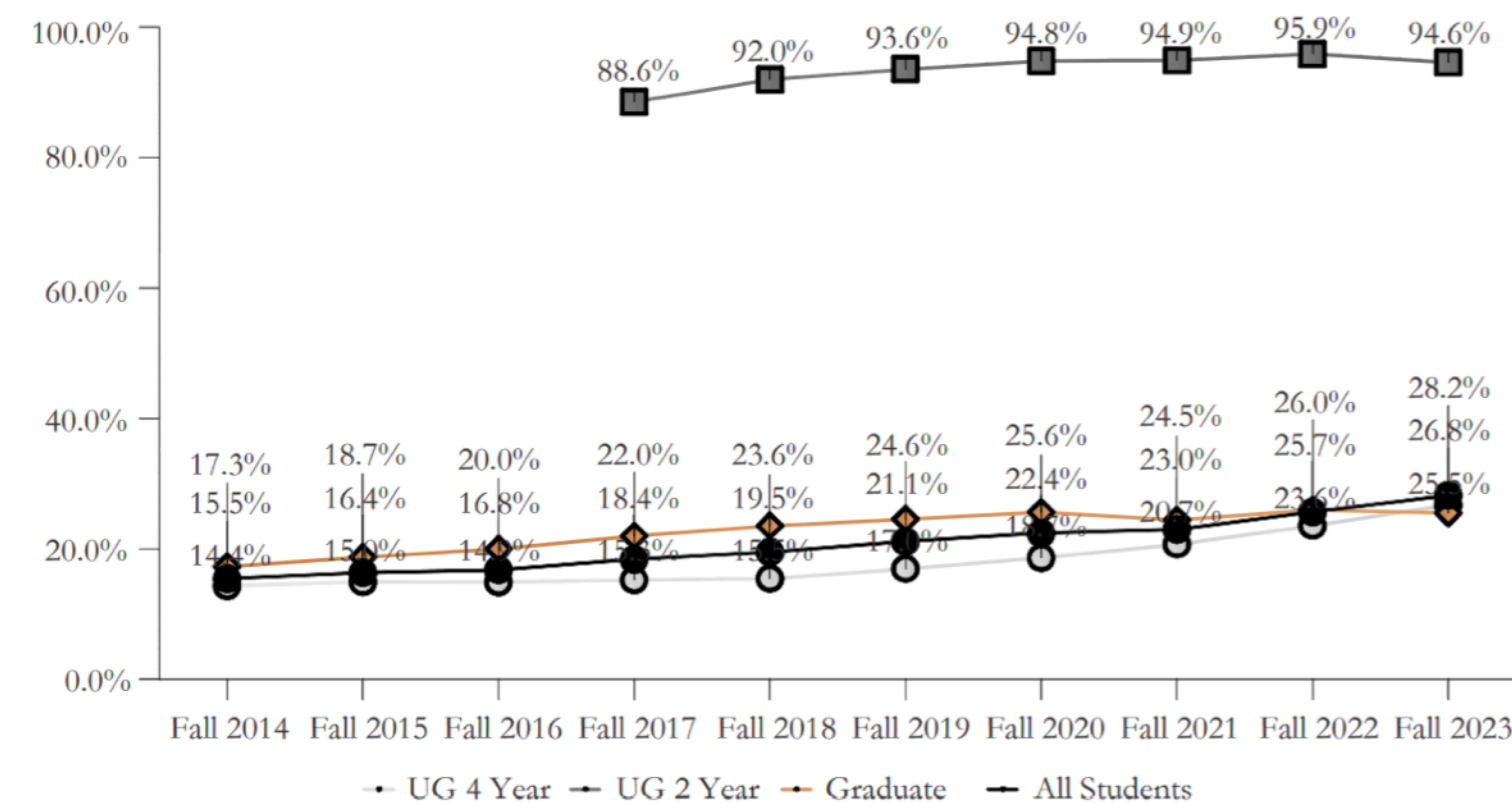
Category	Percent
White	68
Unknown	3.4
Hispanic	8.4
Asian	5.2
Black or African American	7.7
Two or more races	4.2
Native Hawaiian or Pacific Islander	0.07
US Nonresident	3.8

Headcount by Ethnic Category

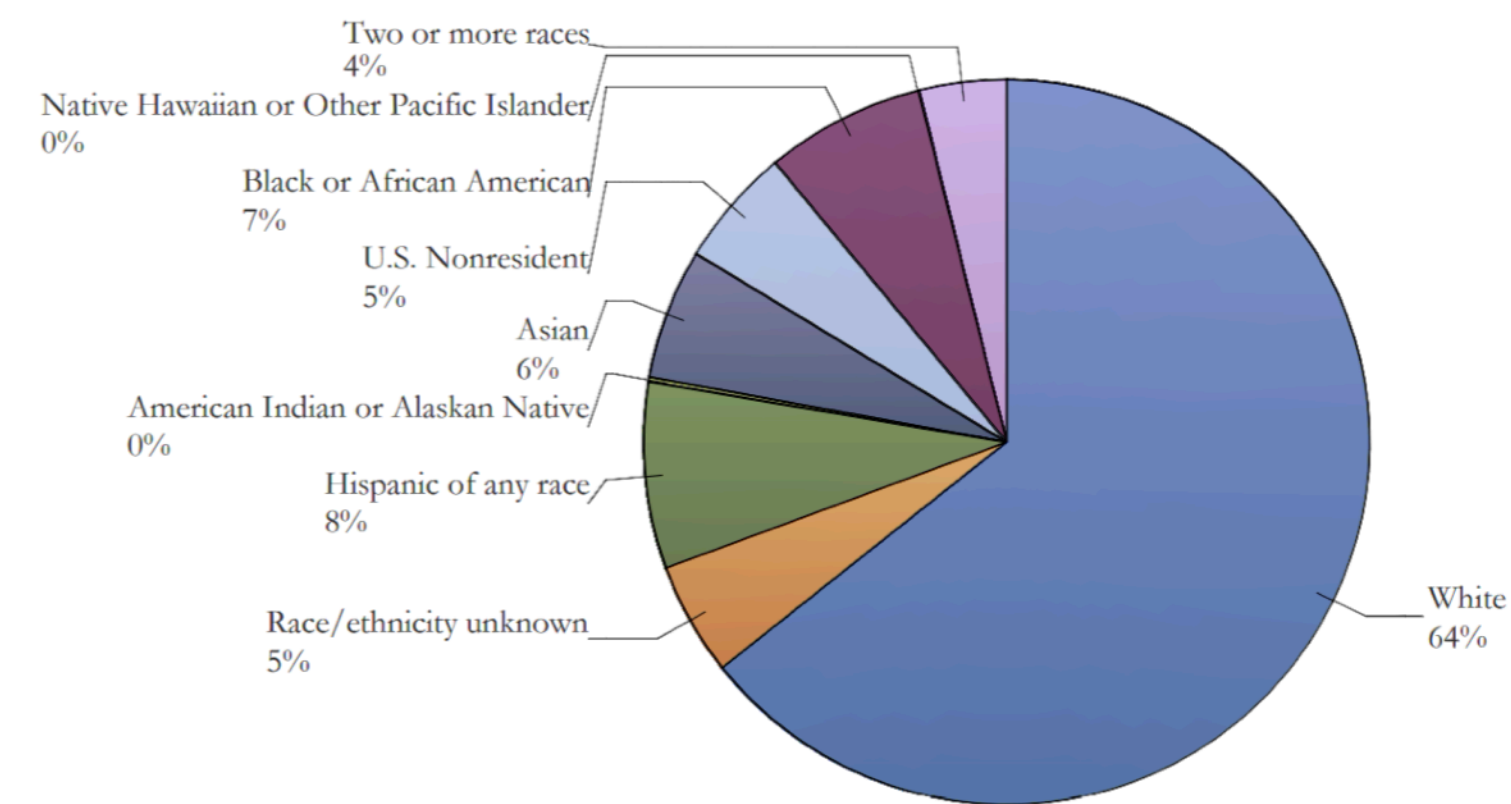
Trend

		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023
UG 4 Year	Race/ethnicity unknown	151	142	130	166	230	258	246	245	228	202
	Black or African American	153	155	155	153	158	167	195	251	304	391
	Hispanic of any race	288	319	297	291	269	318	363	379	427	489
	U.S. Nonresident	200	206	182	172	165	165	183	193	231	219
	American Indian or Alaskan Native	8	10	5	9	12	6	7	11	7	12
	Asian	209	207	221	227	252	278	286	269	285	305
	Native Hawaiian or Other Pacific Islander			2	1	3	3	3	5	4	4
	Two or more races	199	202	189	196	209	205	212	226	230	248
	White	5,026	4,999	4,930	4,877	4,914	4,773	4,642	4,356	4,062	3,970
	Total	6,234	6,240	6,111	6,092	6,212	6,173	6,137	5,935	5,778	5,840

Person of Color as a Percent of Headcount since Fall 2014



Ethnic Category as a Percent of Total Headcount - Fall 2023



Students are counted if they are registered for more than zero credits for the term. Each student is counted once under the primary curriculum of the general student record (for students with level codes in Banner of U(ndergraduate), G(raduate), L(aw), and P(rofessional)).

At the University of St. Thomas, each student is provided with the opportunity to self-report their ethnicity. The ethnicity options are derived from a specified list as mandated by the Department of Education National Center for Education Statistics. The ethnicity options include: Hispanic/Latino, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White, Two or more races. Two additional include: Nonresident alien and Race and ethnicity unknown. Person of Color includes the following categories: Hispanic/Latino, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander. Percent is calculated by dividing the number of Persons of Color by the number of students reporting a race/ethnicity minus Nonresident Aliens.

Lakes in Minneapolis

Name	Area	Max depth	Watershed area	Chain of Lakes?
Bde Maka Ska	421 acres	89.9 feet	2,992 acres	Yes
Lake Harriet	353 acres	82. feet	1,139 acres	Yes
Lake Nokomis	204 acres	33.1 feet	869 acres	No
Cedar Lake	170 acres	50.9 feet	1,956 acres	Yes
Lake of the Isles	103 acres	30.8 feet	735 acres	Yes
Brownie Lake	18 acres	49.9 feet	369 acres	Yes
Cemetery Lake	11 acres	Unknown	Unknown	No
Diamond Lake	41 acres	6.9 feet	669 acres	No
Grass Lake	27 acres	4.9 feet	386 acres	No
Lake Hiawatha	54 acres	82.0 feet	1,139 acres	No
Loring Lake	8 acres	17.4 feet	24 acres	No
Powderhorn Lake	11 acres	20.0 feet	286 acres	No
Ryan Lake	18 acres	35.1 feet	5,510 acres	No

species	island	bill_length_mm	bill_depth_mm	flipper_length_mm	body_mass_g	sex	year
Adelie	Dream	38.9	18.8	190	3600	female	2008
Chinstrap	Dream	50.3	20	197	3300	male	2007
Adelie	Biscoe	41	20	203	4725	male	2009
Adelie	Torgersen	35.1	19.4	193	4200	male	2008
Adelie	Torgersen	41.8	19.4	198	4450	male	2008
Chinstrap	Dream	49	19.5	210	3950	male	2008
Chinstrap	Dream	43.2	16.6	187	2900	female	2007
Adelie	Biscoe	37.8	20	190	4250	male	2009
Chinstrap	Dream	52.8	20	205	4550	male	2008
Chinstrap	Dream	47.5	16.8	199	3900	female	2008
Gentoo	Biscoe	49.2	15.2	221	6300	male	2007
Adelie	Torgersen	42.1	19.1	195	4000	male	2008
Adelie	Torgersen	39	17.1	191	3050	female	2009
Adelie	Dream	36	17.8	195	3450	female	2009
Gentoo	Biscoe	48.7	15.1	222	5350	male	2007
Adelie	Biscoe	37.8	18.3	174	3400	female	2007
Gentoo	Biscoe	43.4	14.4	218	4600	female	2009
Adelie	Dream	37	16.9	185	3000	female	2007
Adelie	Dream	41.5	18.5	201	4000	male	2009
Adelie	Torgersen	38.6	17	188	2900	female	2009
Gentoo	Biscoe	47.5	14	212	4875	female	2009
Chinstrap	Dream	46.4	17.8	191	3700	female	2008
Chinstrap	Dream	49.5	19	200	3800	male	2008
Gentoo	Biscoe	43.3	13.4	209	4400	female	2007
Adelie	Biscoe	41.4	18.6	191	3700	male	2008
Adelie	Dream	35.7	18	202	3550	female	2008
Adelie	Biscoe	38.2	18.1	185	3950	male	2007
Gentoo	Biscoe	46.8	16.1	215	5500	male	2009
Adelie	Dream	40.8	18.9	208	4300	male	2008
Chinstrap	Dream	51.3	19.9	198	3700	male	2007

data from Allison Horst's [palmerpenguins](#) package

Step 1: sketching

**Make at least three sketches of ideas
(5 minutes)**

**Step 2: pick a visualization and
finish it
Think about your encodings**