Data Science for the Juvenile Court

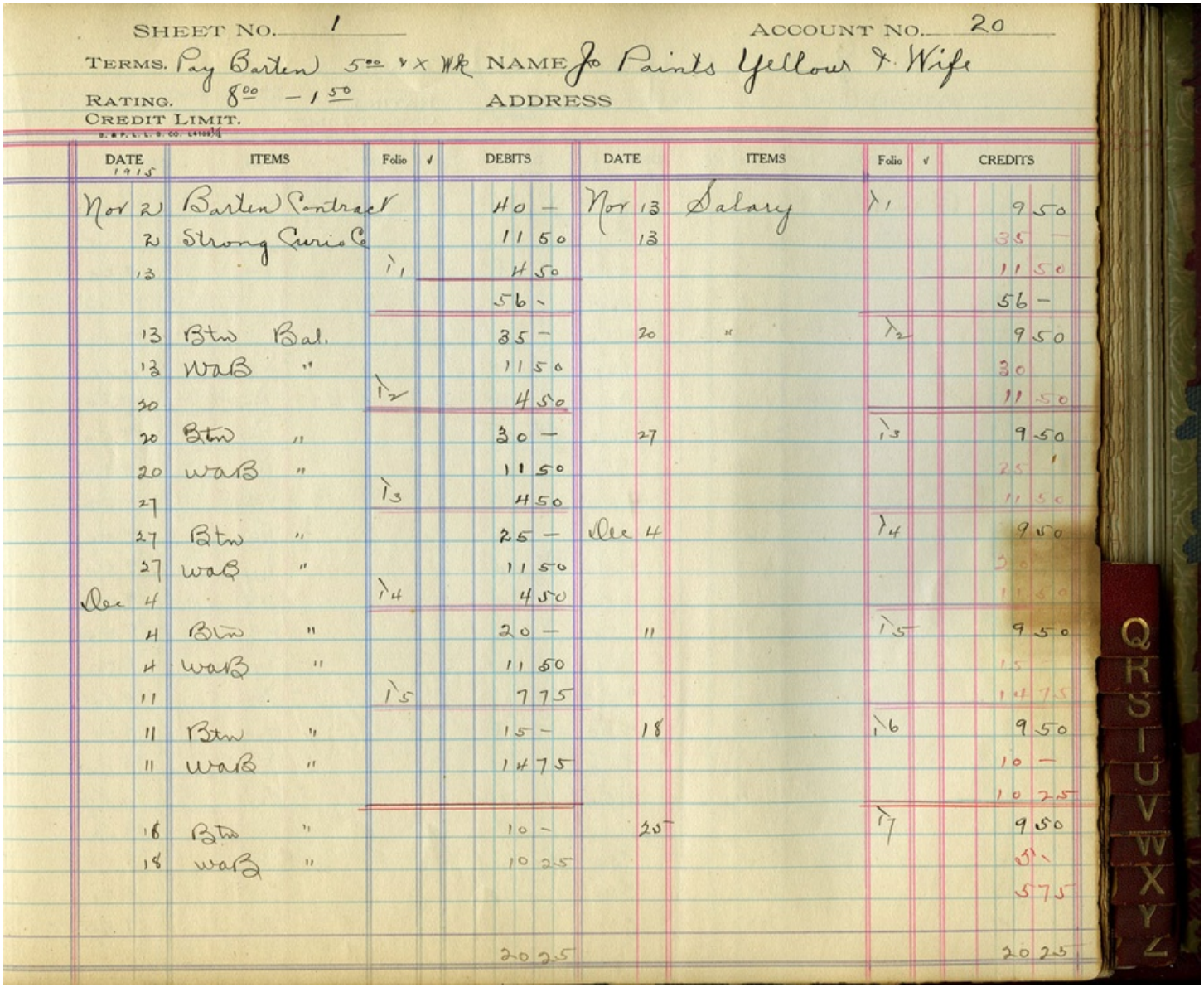
Martin Gleason, MS

12/5/2017

Ubiquity, Abstraction, Absurdity

Figure 1:

Human Driven Process



SHEET NO. 1 ACCOUNT NO. 20

TERMS. Pay Barten 5.00 ⅌ wk NAME Jo Paints Yellow & Wife

RATING. 8.00 – 1.50 ADDRESS

CREDIT LIMIT.

DATE 1915	ITEMS	Folio	✓	DEBITS
Nov 2	Barten Contract			40 –
2	Strong Curio Co			11 50
13		1		4 50
				56 –
13	Btw Bal.			35 –
13	WAB "			11 50
30		2		4 50
20	Btw "			30 –
20	WAB "			11 50
27		3		4 50
27	Btw "			25 –
27	WAB "			11 50
Dec 4		4		4 50
4	Btw "			20 –
4	WAB "			11 50
11		5		7 75
11	Btw "			15 –
11	WAB "			14 75
18	Btw "			10 –
18	WAB "			10 25
				20 25

DATE	ITEMS	Folio	✓	CREDITS
Nov 13	Salary	1		9 50
13				35 –
				11 50
				56 –
20	"	2		9 50
				30
				11 50
27		3		9 50
				25
				11 50
Dec 4		4		9 50
				30
				11 50
11		5		9 50
				15
				14 75
18		6		9 50
				10 –
				10 25
		7		9 50
				50 –
				57 75
				20 25

Figure 2: Spreadsheets are digital ledgers

Complex But Concrete

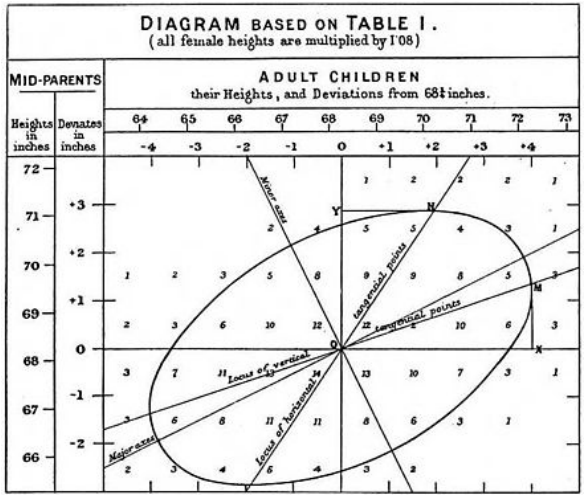


Figure 3: Galton's Work on Regression to the mean. He was also a racist piece of garbage

Cloud Computing

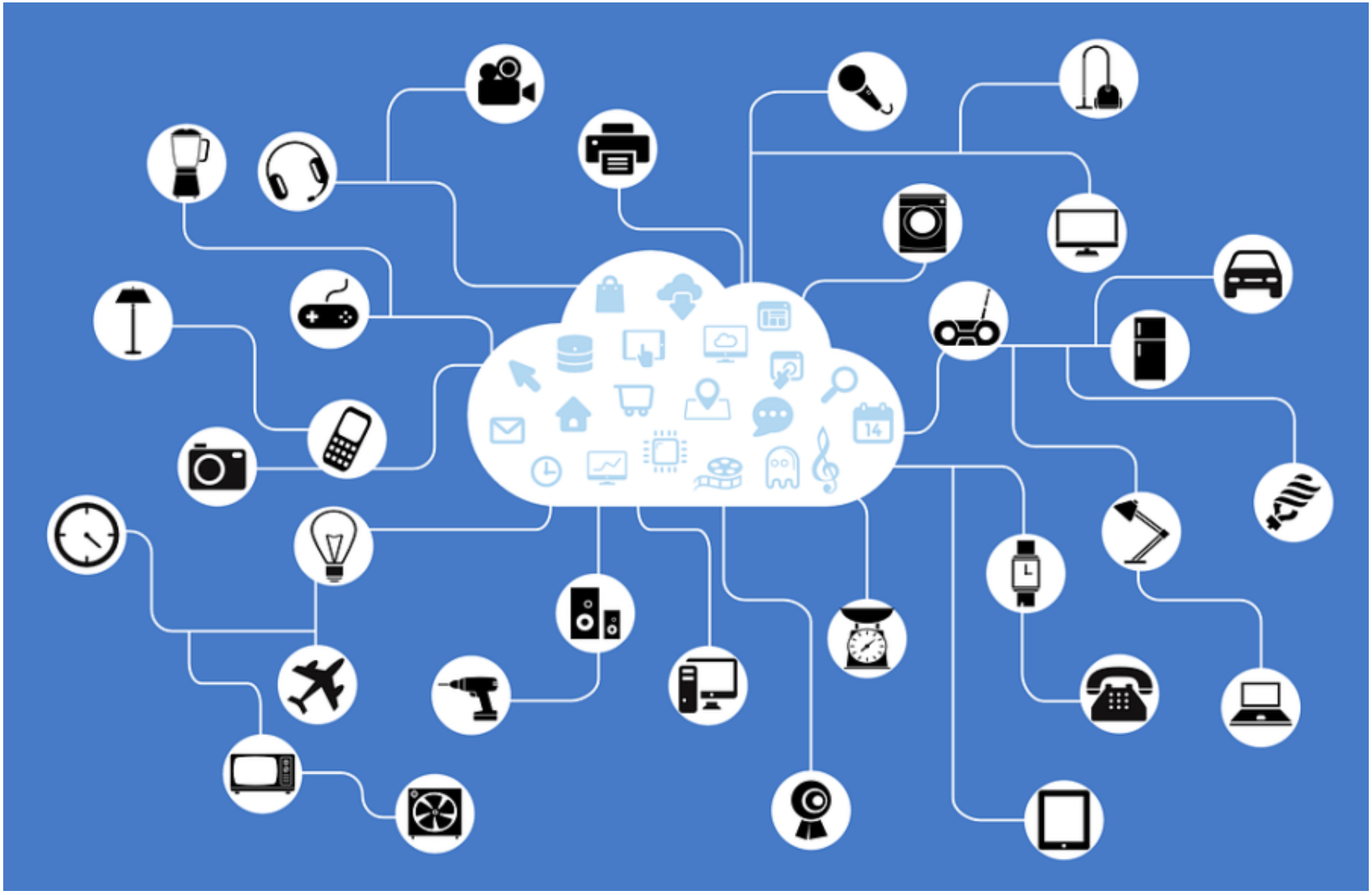


Figure 4: Complex AND Abstract

Data science, what is it?

Figure 5:

Data science, what is it?

- Data Science is the way we study the capture, storage, and transformation of data into information.
- It's that complex stuff Marty talks about all the damn time. –Toastmasters, 2017

Data Scienctists

Hadley Wickham,
PhD

Data Science is

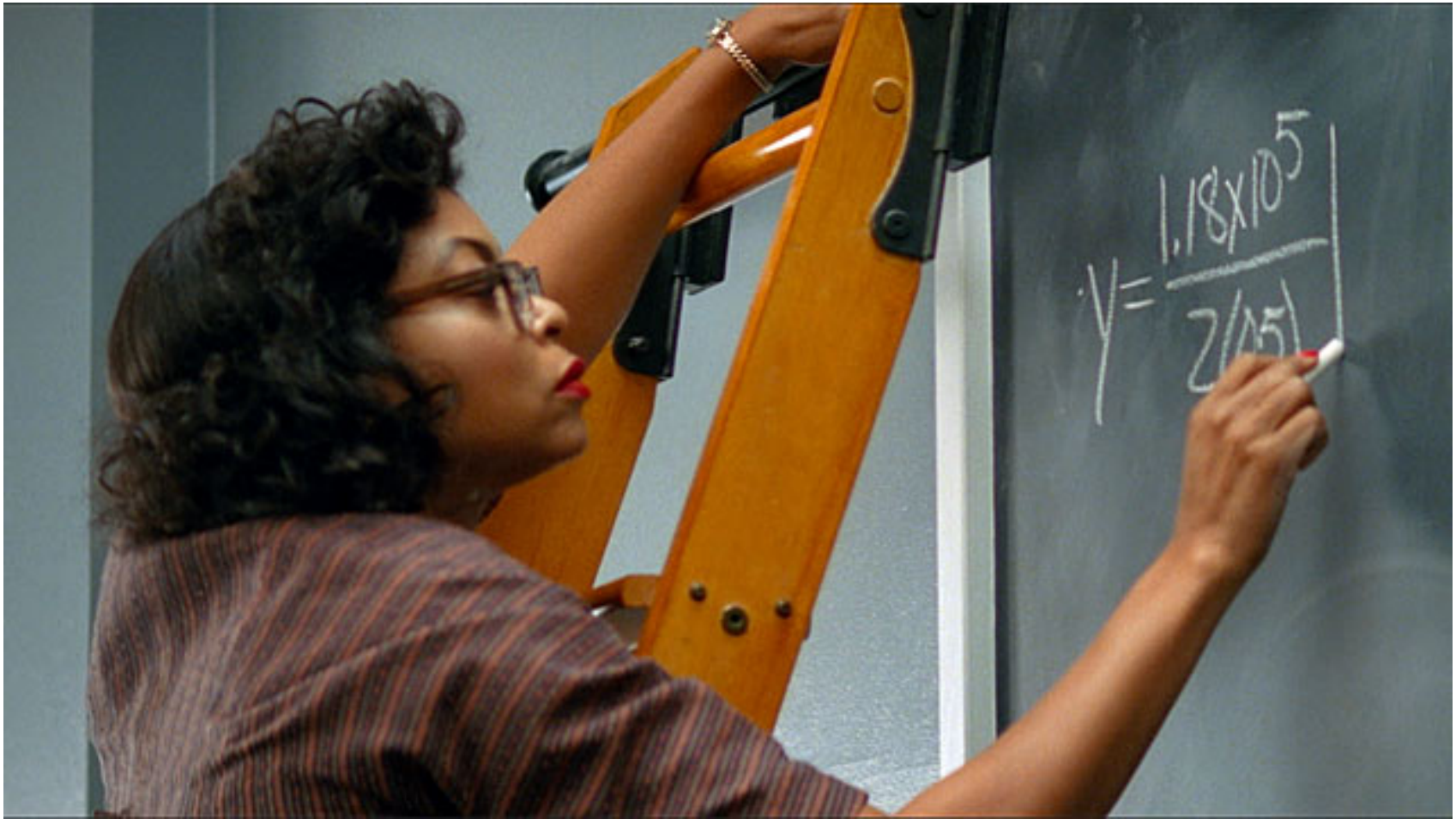


Figure 6: Using data to solve probelms

What is Social Good?

Figure 7: If we work at 1100 S Hamilton, we work for the social good

What is Data Science for the Social Good?

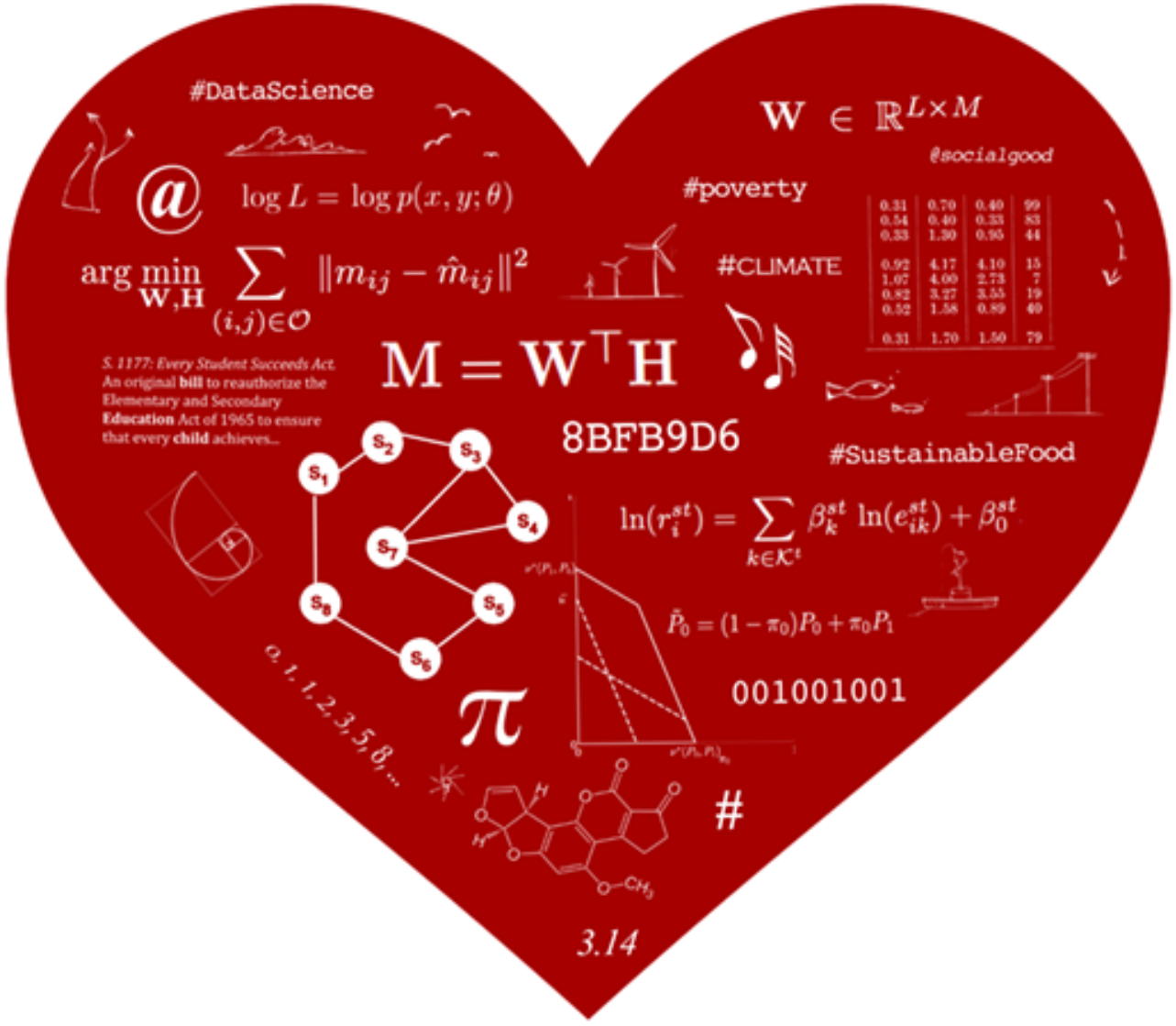
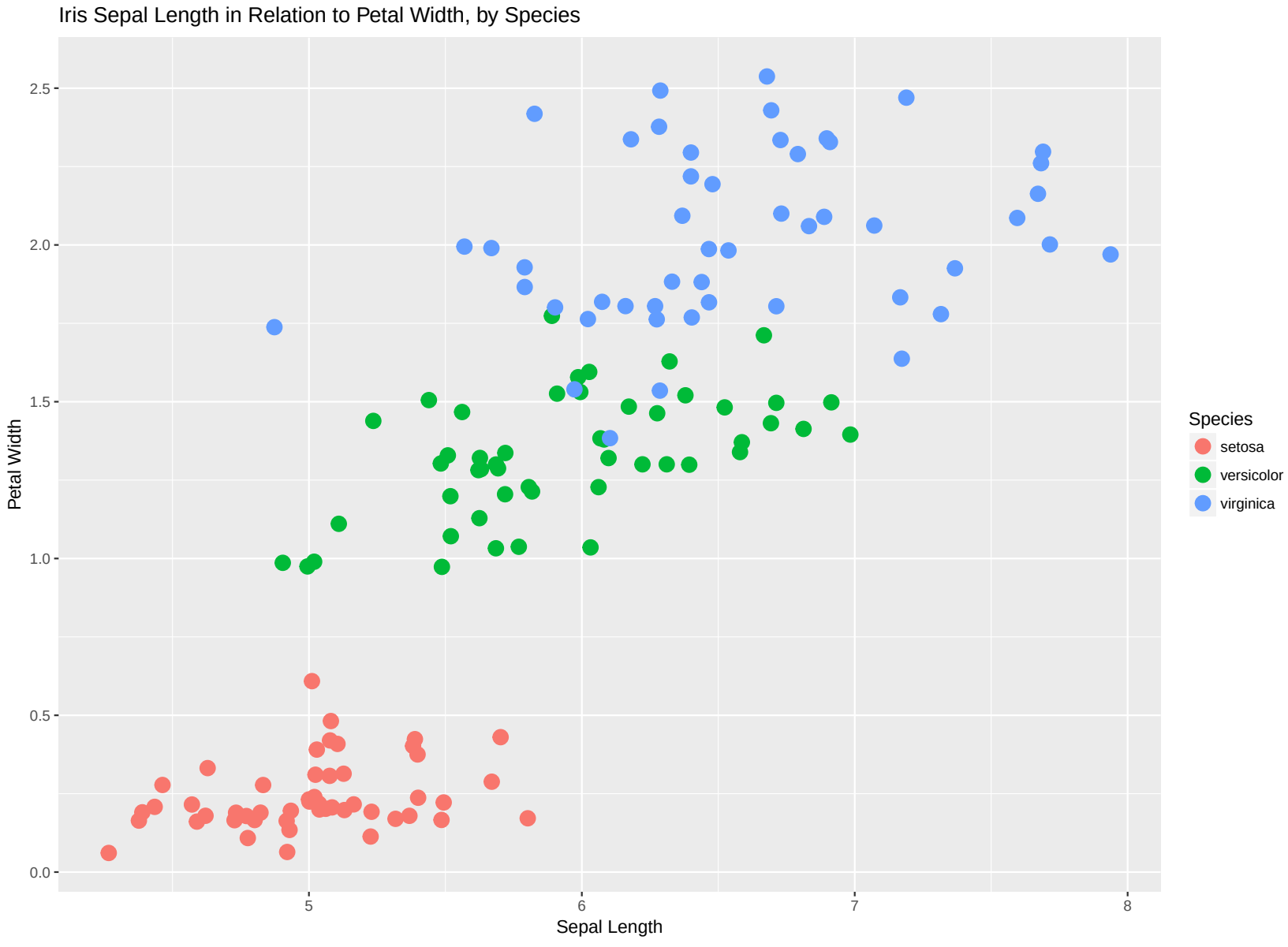


Figure 8:

Data Science for the Social Good

- Using data science principles to make the world a better place
- Identiying problems
- New Solutions
- Reproducing it to scale
- What would Data Science for the Juvenile Court Look Like?

Concrete Steps: What is Visualizing our Information?



Sepal Plot

- Shows us at a glance what the relationship is between flower parts across three species of flower
- What does our data show us?

Our Data, Visualized

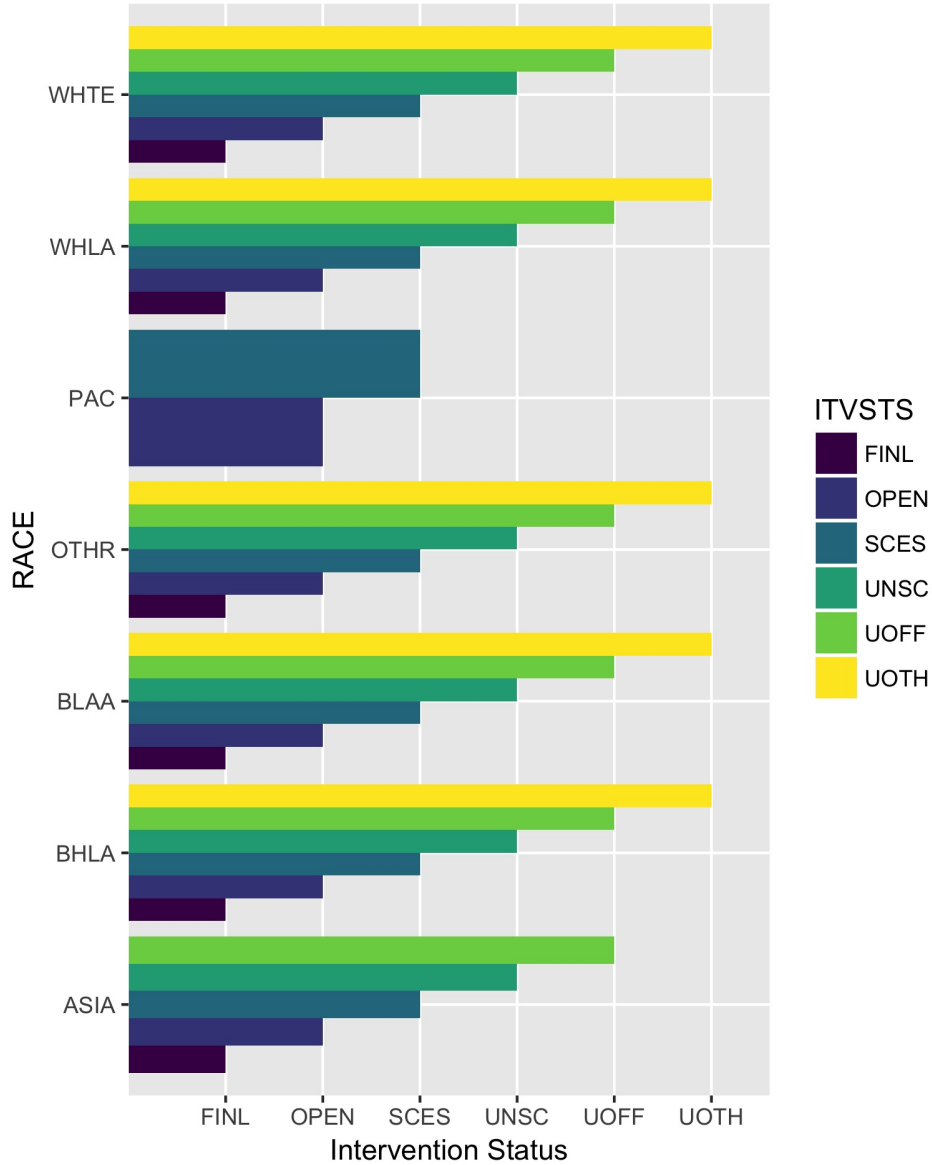


Figure 9: Based on Diversion Data from 2012-2016

Methods

- Tidy Data
- Statisical Analysis
- Understaning the problem

Tools

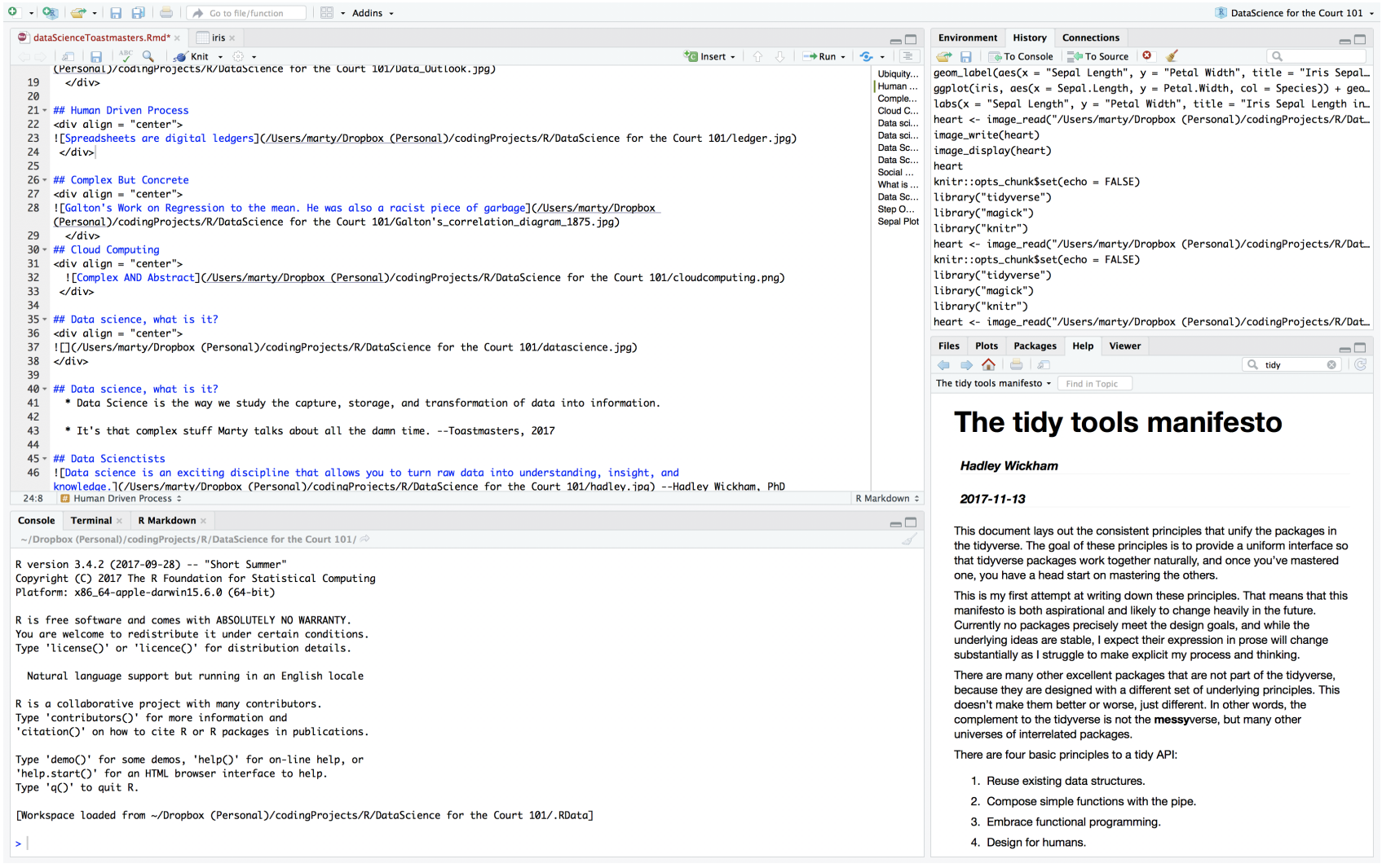


Figure 10: The code behind this presentation

Data Science for the Juvenile Court

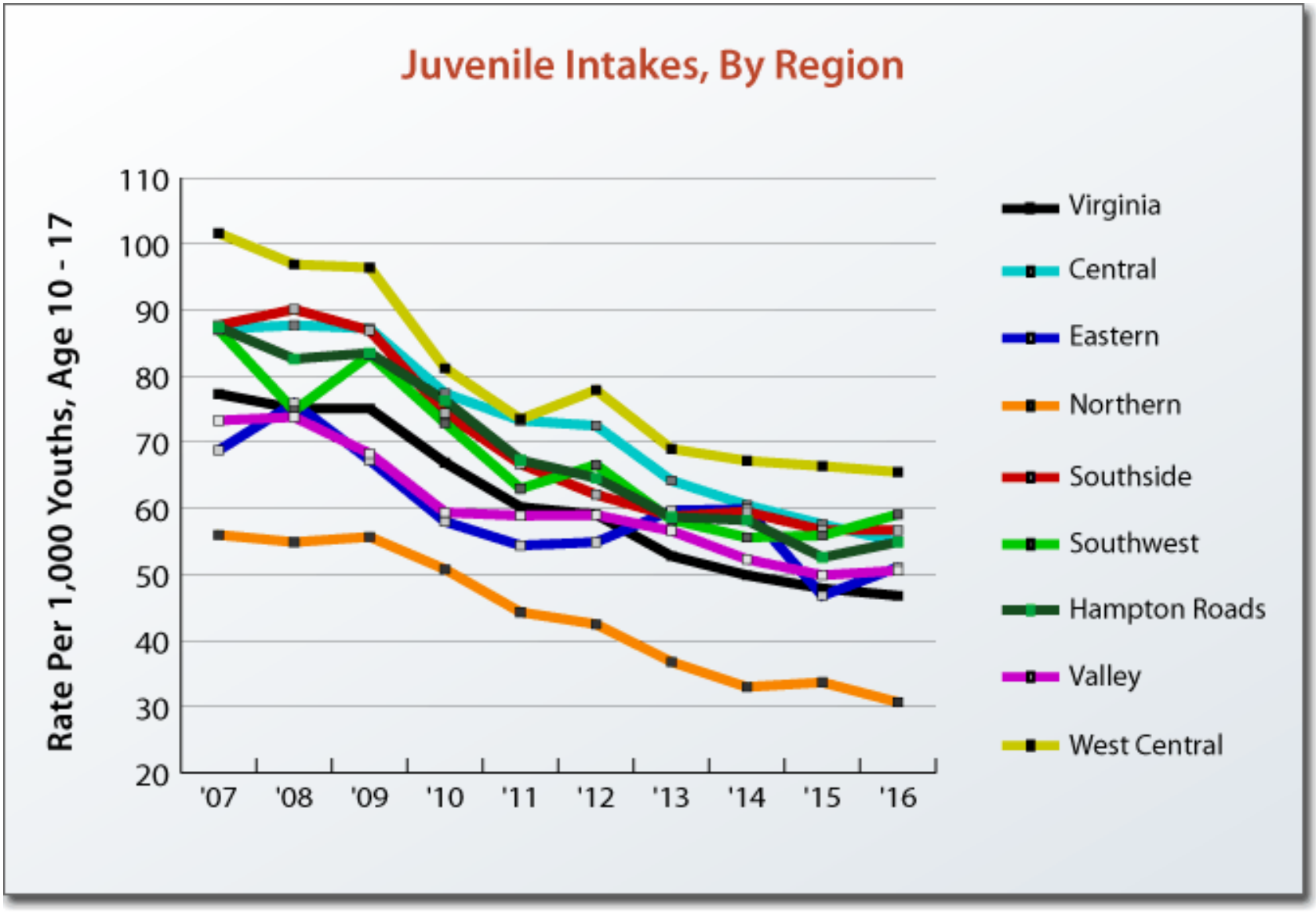


Figure 11: End Game: Explaining this!