Reverse Engineering Klout Score

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What Is Klout Score?

- Klout is a website and mobile app that gives their users a "Klout Score".

- Klout Score is a number from 1 to 100 representing how "influential" a user is across all of social media.

- Klout Score does not depend on what you say, but rather how people react to it.
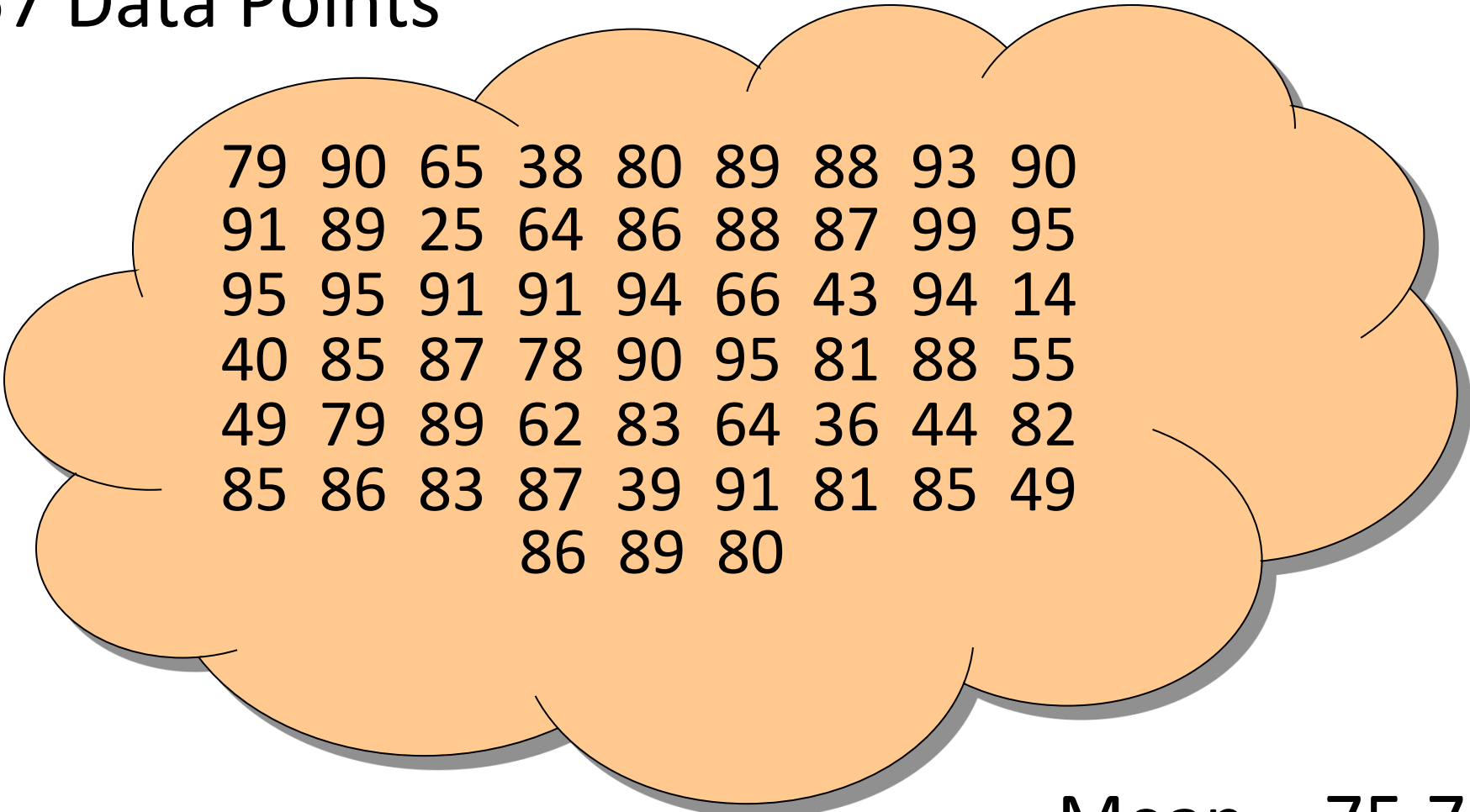
Klout Score According to Klout

- Klout Score uses 400 variables from a users public Twitter, Facebook, Google+, LinkedIn and Foursquare profiles from the last 90 days.

- The average Klout score is close to 20 and a score greater than 50 puts you in the 95th percentile.

- "Posting a thousand times and getting zero responses is not as influential as posting once and getting a thousand responses."

Klout Score Examples

Name	Klout Score
Barack Obama	99
Justin Timberlake	95
LeBron James	92
Jimmy Fallon	91
Joe Biden	89
Michelle Obama	89
Mindy Kaling	86
Aamir Khan	86
Elon Musk	85
Marissa Mayer	85
Sean Cooke (Me)	47

Observed Klout Score Distribution

57 Data Points

79	90	65	38	80	89	88	93	90
91	89	25	64	86	88	87	99	95
95	95	91	91	94	66	43	94	14
40	85	87	78	90	95	81	88	55
49	79	89	62	83	64	36	44	82
85	86	83	87	39	91	81	85	49
			86	89	80			

Mean = 75.72

Observed Klout Score Distribution

Five Number Summary	
Sample Minimum	14
First Quartile	65
Median	85
Third Quartile	90
Sample Maximum	99

What Contributes Most To Klout Score?

Barack Obama — 99

Barack Obama has active Twitter and Facebook profiles, and he also has the most important Wikipedia page online.

Justin Bieber — 92

Although Justin Bieber has one of the most recognizable and engaged Twitter accounts, his Wikipedia ranking is much lower than President Barack Obama's. This results in a lower, although very impressive Klout Score.

Zooey Deschanel — 86

This actress and singer has a very active social media presence, including Twitter, where she consistently receives mentions, replies and retweets from thousands of followers. This, along with her Wikipedia ranking gives her a very strong Klout Score.
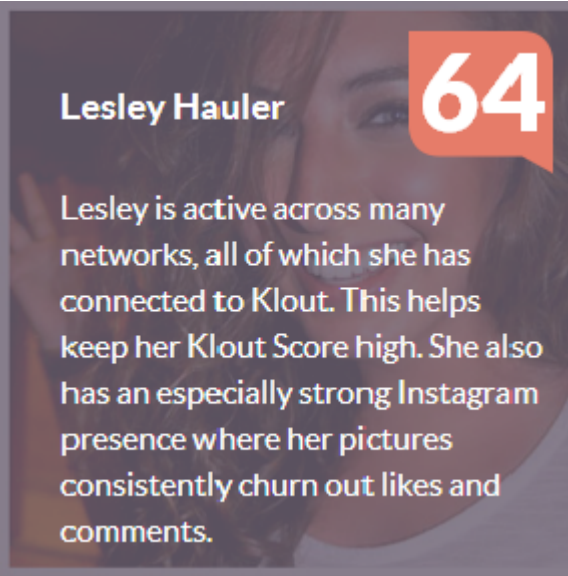
Jessica Gottlieb — 78

Jessica produces engaging content about motherhood across all her social networks, which are all connected to Klout. Jessica keeps her updates witty, which keeps her friends and followers eager to reply.

Mao Ye — 46

Mao is primarily a Facebook user. He keeps fresh content on his profile, which helps keep people talking on his wall. He's also connected all his social media accounts to his Klout profile, which helps keep his Klout Score above average.

Lesley Hauler — 64

Lesley is active across many networks, all of which she has connected to Klout. This helps keep her Klout Score high. She also has an especially strong Instagram presence where her pictures consistently churn out likes and comments.

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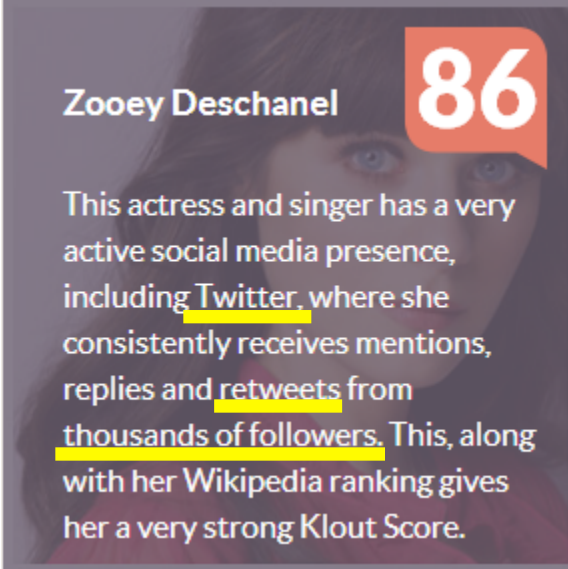
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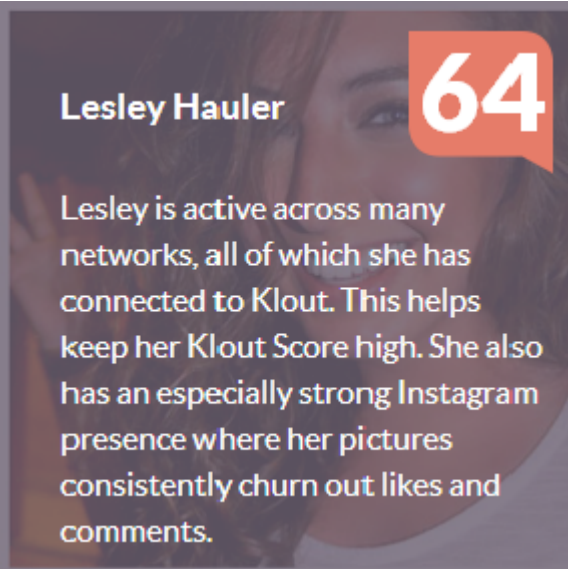
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What Information Should We Use?

- "Klout Score can be estimated using log(retweets) or log(followers)"

- Why not both?

- Suspected Equation Form:

$$A + B * \ln(Twitter\ Followers) + D * \ln(Retweets) = Influence\ Score$$
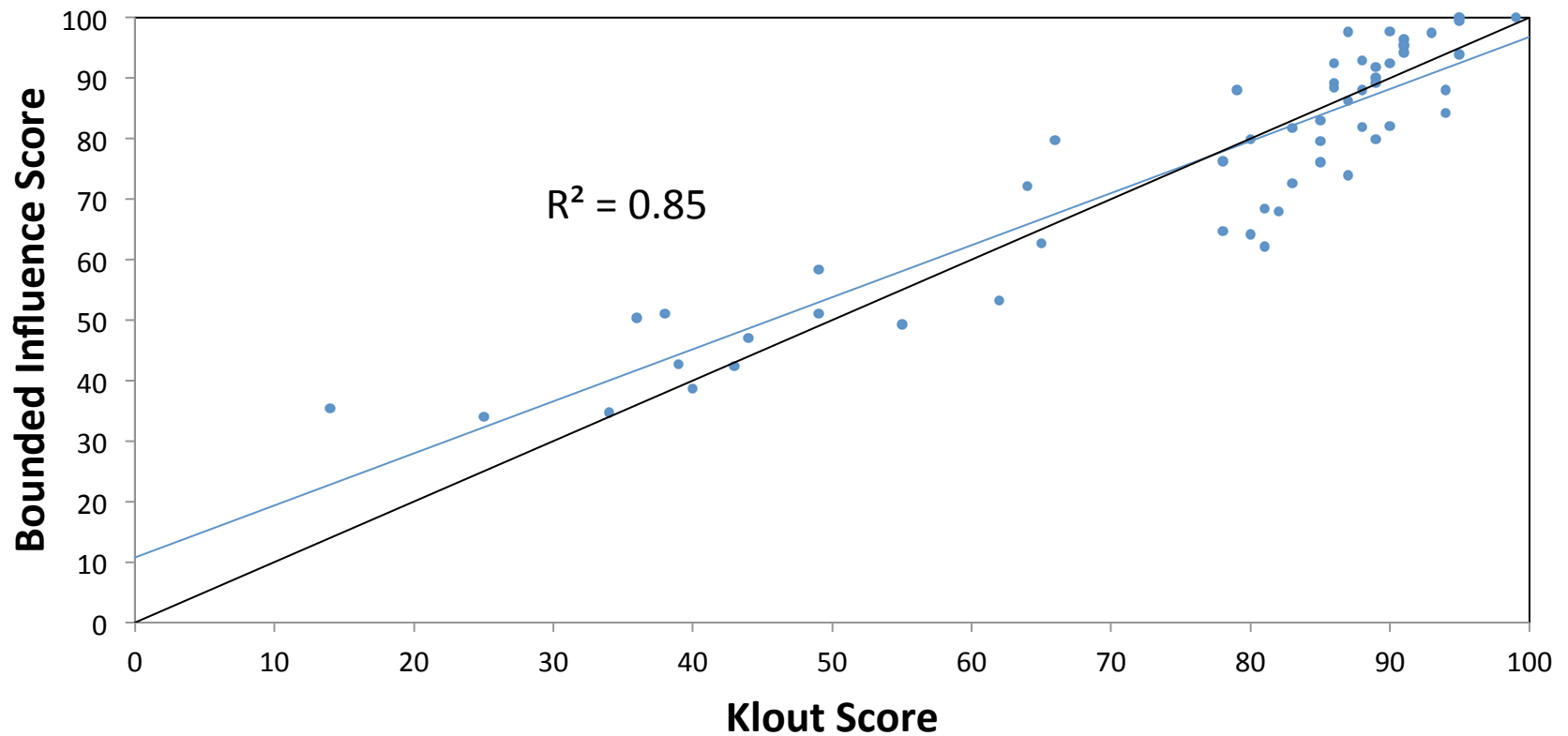
Method of Least Squares and Solver

- The method of least squares was used to minimize the amount of error in my influence score

- Solver numerically determined the equation: $18.098 + 3.149 * \ln(Twitter\ Followers) + 1.888 * \ln(Retweets) = Influence\ Score$

- This Influence Score was then bounded between 1 and 100

Variance Inflation Factor

- Are Twitter Followers and Retweets too correlated?

- No variance inflation with nonlinear model

- Therefore our R^2 value is not artificially inflated and our model remains stable
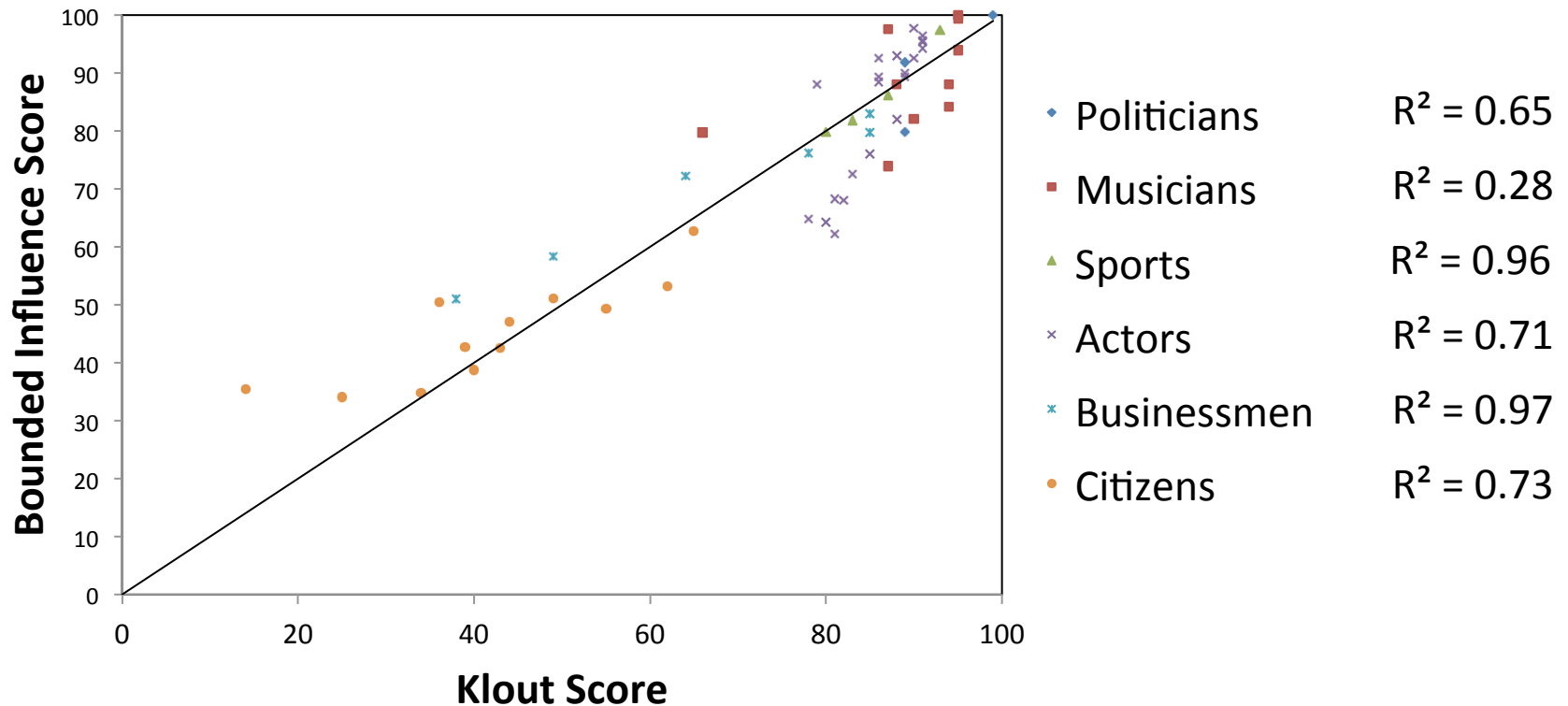
Regression Analysis

Linearity of Bounded Influence Score

Who Is This a Good Estimate For?

Category	Count
Actor	21
Citizen	12
Musician	11
Businessman	6
Sports	4
Politician	3

Who Is This a Good Estimate For?

Linearity of Bounded Influence Score by Category

Predicting Klout

- A Klout Score is only calculated for those users who sign up for Klout

- Many Twitter users do not have a Klout Score

- A Klout Score prediction can be made using my Bounded Influence Formula

@GeneseoGREATDay's Bounded Influence Score

- @GeneseoGREATDay does not have a Klout Score but it does have a Bounded Influence Score

- Number of Twitter Followers: 26

- Number of Retweets: 11

- $33 \approx 32.886 = 18.098 + 3.149*\ln(26) + 1.888*\ln(11)$

Future Plans

- I would like to see if an R^2 value greater than 0.85 can be achieved using just people who fall under the category of "Sports" and/or "Businessmen"

- Applying equation form to rank freelancers