# 11. Fame

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# The Problem

Some people in the modern World are considered 'famous' since they frequently appear in the news, TV, and social media.

Suggest a quantitative parameter of such 'fame', and build lists of persons that are sorted according to this parameter.

# Definitions

Fame:

*The state of being known or talked about by many people, especially on account of notable achievements.*

Parameter:

1. *a numerical or other measurable factor forming one of a set that defines a system or sets the conditions of its operation.*

# My survey

- Data from survey is 'actual measure of fame'
- I compared data from survey to quantitative parameters I could find
  - My survey, got 1,070 responses
  - My survey asked about 21 people
- Some were very famous some were not

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# Name Recognition

# Face Recognition

# Is person known

## Name Recognition

### People you know

Don't guess the answer for this one, if you don't know who they are just click, I don't know.
Some of these questions have more then one correct answer, just click either one of them.
Please answer honestly.

What is Donald Trump famous for?

○ TV personality

○ Actor

○ Journalist

○ Political figure

○ I don't know

What is Bill Gates famous for?

# People in Survey

Jeff Bezos, Katy Perry, Cristiano Ronaldo, Elon Musk, Bill Gates, Ralph Fiennes, Brad Pitt, Pippa Middleton, Jacob Sartorius, Tiffany Haddish, Beyoncé, John Green, Kendall Jenner, Bella Forrest, Yayoi Kusama, Donald Trump, Édouard Philippe, Mark A. Milley, Chris Hemsworth, Gigi Hadid, Banksy

# Who answered my survey

- New Zealanders
- Reddit, /r/samplesize
  - 56.7% 18-25
  - 22.7% 26-35,
  - 14.4% <17
- 63.1% male, and 33.3% female
  - 81.8% white
- 69.8% American, 10.1% Canadian, 8.1% UK

# Quantitative Measures

- Google search results
- Monthly searches
- Social media followers:
- Facebook
- Twitter
- Instagram
- Average of all three

# Data (survey)

| Famous People: | Name recognition | Face recognition: | Knows person: |
|---|---|---|---|
| Jeff Bezos | 763 | 523 | 728 |
| Katy Perry | 1051 | 851 | 1029 |
| Cristiano Ronaldo | 847 | 644 | 863 |
| Elon Musk | 1029 | 906 | 1002 |
| Bill Gates | 1058 | 955 | 1055 |
| Ralph Fiennes | 416 | 414 | 394 |
| Brad Pitt | 1040 | 899 | 1039 |
| Pippa Middleton | 532 | 377 | 560 |
| Jacob Sartorius | 397 | 288 | 324 |
| Tiffany Haddish | 199 | 179 | 116 |
| Beyonce | 1051 | 838 | 1048 |
| John Green | 679 | 606 | 671 |
| Kendall Jenner | 890 | 603 | 839 |
| Bella Forrest | 12 | 13 | 2 |
| Yayoi Kusama | 64 | 135 | 118 |
| Donald Trump | 1057 | 1056 | 1049 |
| Emmanuel Macron | 692 | 417 | 719 |
| Mark A. Milley | 3 | 36 | 25 |
| Chris Hemsworth | 911 | 842 | 894 |
| Gigi Hadid | 526 | 309 | 400 |
| Banksy | 810 | N/A | 797 |

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# Data (google searches)

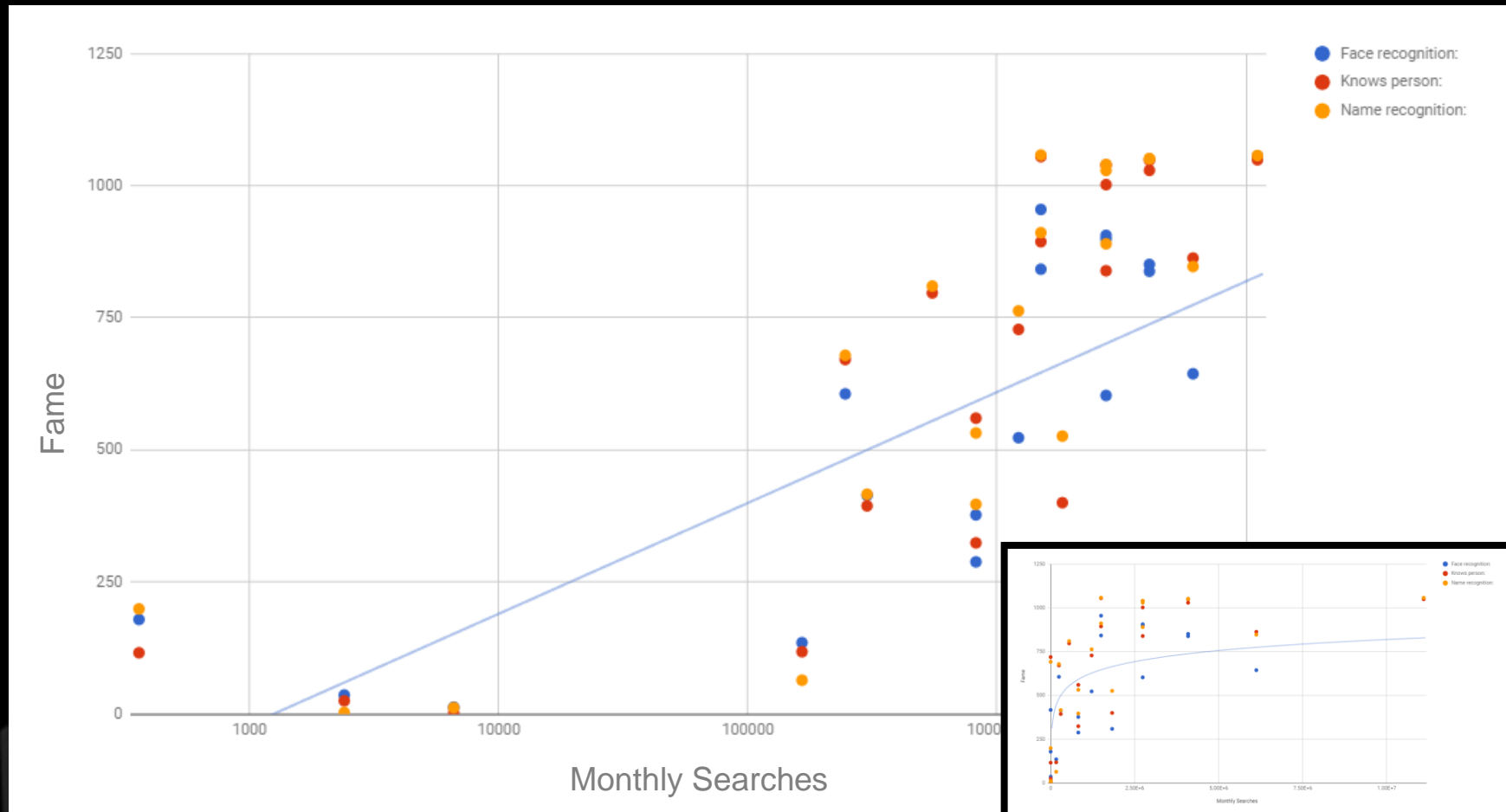| A Famous People: | E Search Results: | F Search results "" | G Searches monthl |
|---|---|---|---|
| Jeff Bezos | 11,800,000 | 10,100,000 | 1,220,000 |
| Katy Perry | 338,000,000 | 124,000,000 | 4,090,000 |
| Cristiano Ronaldo | 219,000,000 | 119,000,000 | 6,120,000 |
| Elon Musk | 101,000,000 | 68,900,000 | 2,740,000 |
| Bill Gates | 403,000,000 | 110,000,000 | 1,500,000 |
| Ralph Fiennes | 9,020,000 | 5,170,000 | 301,000 |
| Brad Pitt | 110,000,000 | 57,100,000 | 2,740,000 |
| Pippa Middleton | 28,600,000 | 10,800,000 | 823,000 |
| Jacob Sartorius | 13,900,000 | 6,200,000 | 823,000 |
| Tiffany Haddish | 5,820,000 | 5,750,000 | 360 |
| Beyonce | 223,000,000 | 183,000,000 | 4,090,000 |
| John Green | 2,940,000,000 | 16,000,000 | 246,000 |
| Kendall Jenner | 89,500,000 | 51,600,000 | 2,740,000 |
| Bella Forrest | 11,300,000 | 395,000 | 6,600 |
| Yayoi Kusama | 5,710,000 | 4,180,000 | 165,000 |
| Donald Trump | 687,000,000 | 260,000,000 | 11,100,000 |
| Emmanuel Macron | 79,900,000 | 30,400,000 | 0 |
| Mark A. Milley | 401,000 | 76,400 | 2,400 |
| Chris Hemsworth | 39,300,000 | 26,000,000 | 1,500,000 |
| Gigi Hadid | 56,700,000 | 41,800,000 | 1,830,000 |
| Banksy | 21,200,000 | 19,200,000 | 550,000 |

# Data (social media)

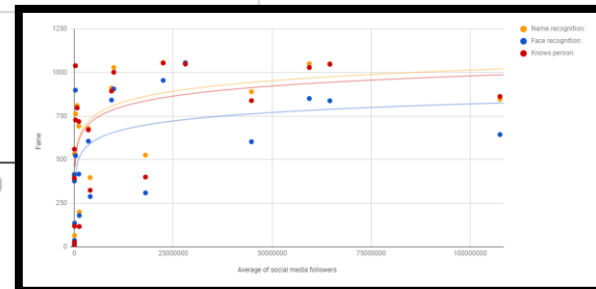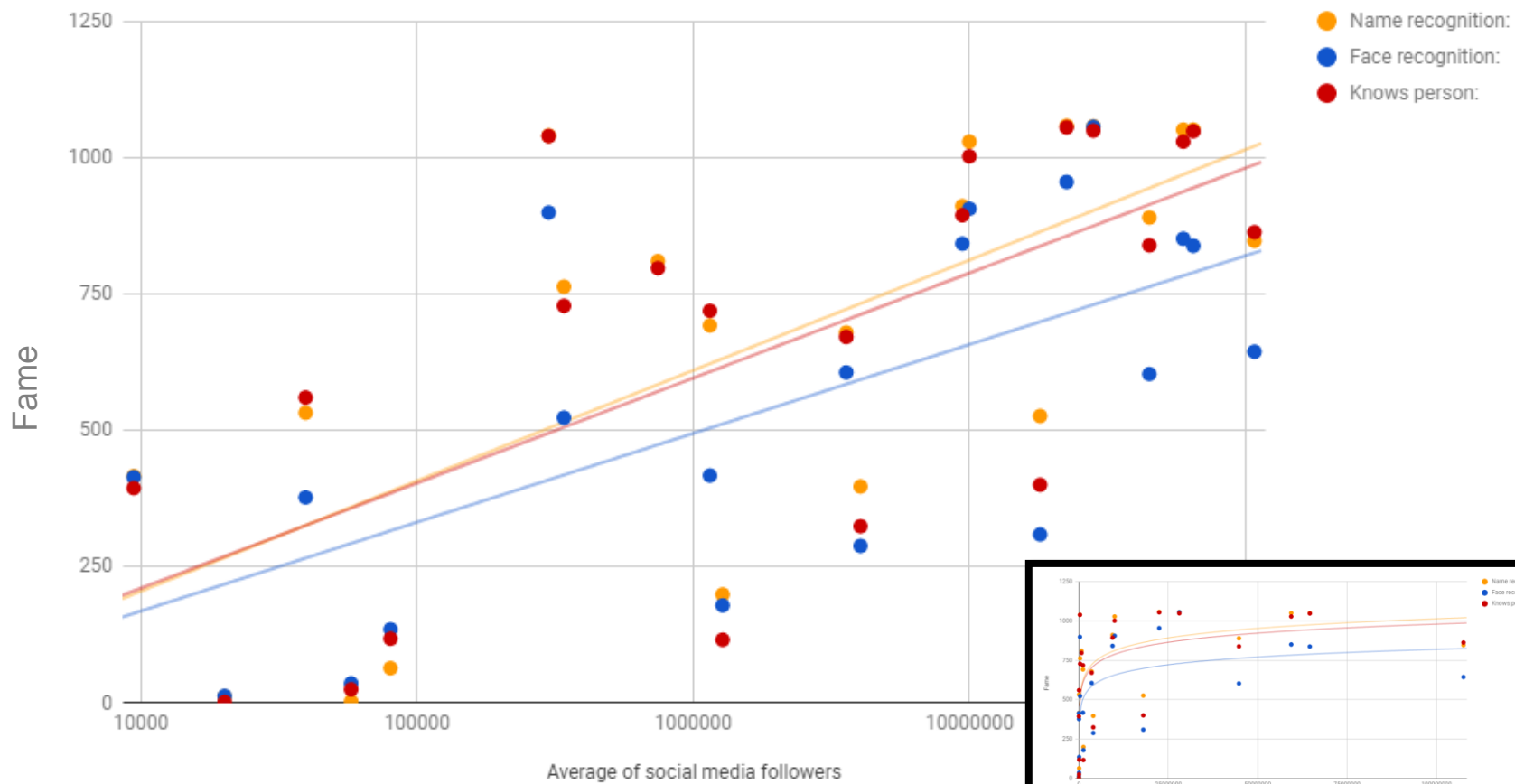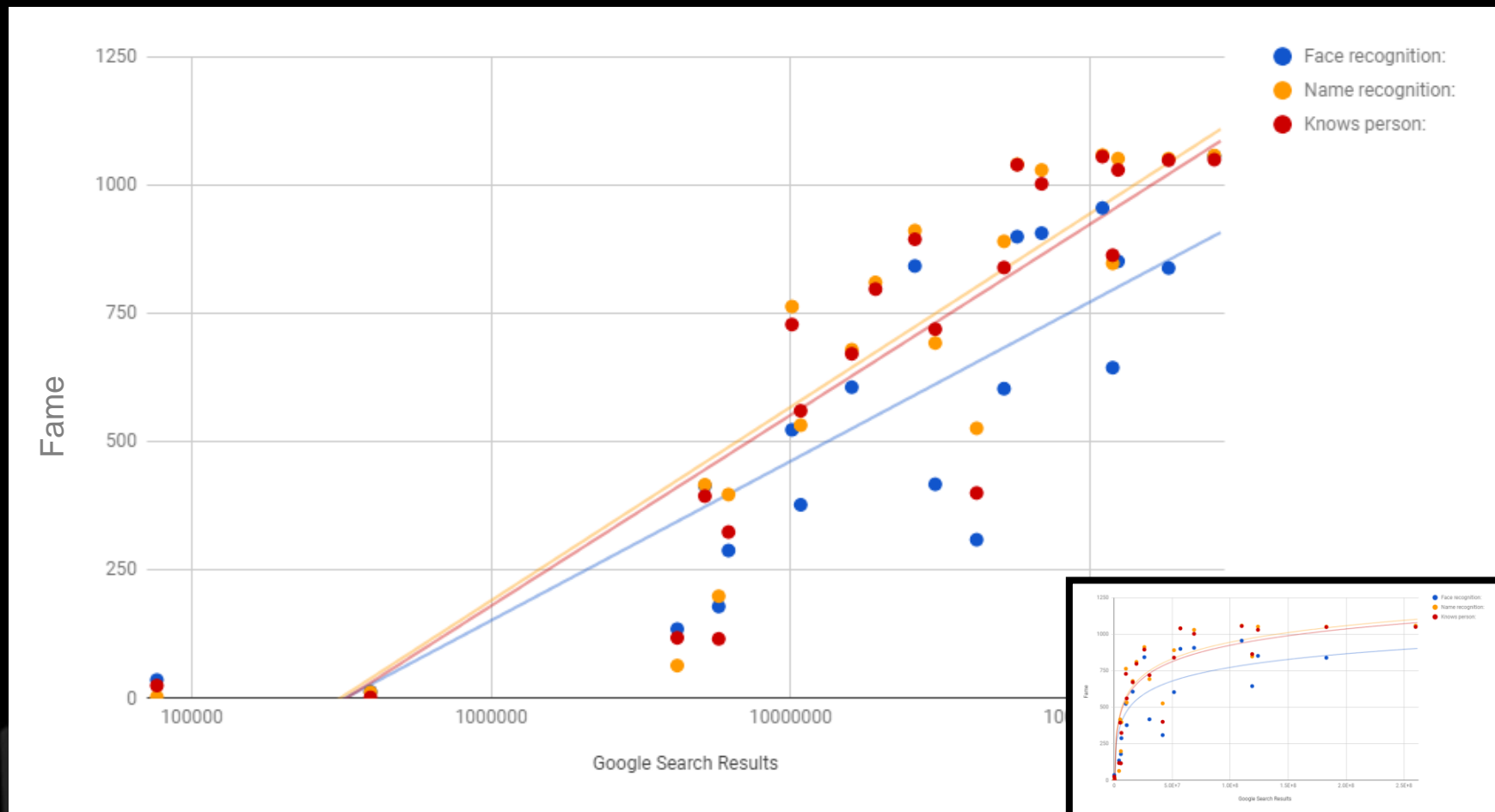| Famous People: | Twitter followers: | Facebook likes: | Facebook Follow | Instergram Follow | Avrg of followers: |
|---|---|---|---|---|---|
| Jeff Bezos | 569851 | 2,767 | 2,870 | 448000 | 340240.3 |
| Katy Perry | 109,421,808 | 68,708,610 | 64,954,011 | 69900000 | 59376806 |
| Cristiano Ronaldo | 73174841 | 122,418,848 | 120,477,695 | 127000000 | 107531229.7 |
| Elon Musk | 21778399 | 475,659 | 122,418,848 | 7700000 | 9984686 |
| Bill Gates | 46106767 | 19,678,787 | 19,538,179 | 1600000 | 22461851.3 |
| Ralph Fiennes | 3711 | 21,983 | 21,922 | 2,573 | 9422.3 |
| Brad Pitt | 243871 | 34,086 | 33,617 | 621000 | 299652.3 |
| Pippa Middleton | 3850 | 17,349 | 16,774 | 97300 | 39499.7 |
| Jacob Sartorius | 1669444 | 1,219,055 | 1,230,638 | 9200000 | 4029499.7 |
| Tiffany Haddish | 320443 | 709,045 | 736,525 | 2800000 | 1276496 |
| Beyonce | 15422961 | 63,294,277 | 59,734,566 | 115000000 | 64572412.7 |
| John Green | 5422961 | 3,113,404 | 3,059,575 | 2200000 | 3578788.3 |
| Kendall Jenner | 26921512 | 16,184,037 | 16,080,074 | 91200000 | 44768516.3 |
| Bella Forrest | 5463 | 14,588 | 14,676 | 56 | 20107 |
| Yayoi Kusama | 1264 | 123,280 | 123,142 | 116000 | 80181.3 |
| Donald Trump | 52043605 | 23,270,861 | 24,588,776 | 8900000 | 28071488.7 |
| Emmanuel Macron | 328962 | 2,259,228 | 2,433,134 | 858000 | 1148730 |
| Mark A. Milley | 55299 | 81,334 | 83,224 | 36500 | 57711 |
| Chris Hemsworth | 3410716 | 6,350,272 | 6311754 | 18500000 | 9420329.3 |
| Gigi Hadid | 9191580 | 4,316,222 | 4,335,480 | 40500000 | 18002600.7 |
| Banksy | 21001 | 12,127 | 12,256 | 2200000 | 744376 |

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# Monthly Searches

# Average Social Media Followers

# Google Search Results

# Most accurate quantitative parameter

# Average of Social Media Followers

- Name Recognition: $r^2$ = 0.489
- Knows Person: $r^2$ = 0.438
- Face Recognition: $r^2$ = 0.421

# Monthly Searches

- Name Recognition: $r^2$ = 0.673
- Knows Person: $r^2$ = 0.675
- Face Recognition: $r^2$ = 0.588

# Google Search Results

- Name Recognition: $r^2$ = 0.798
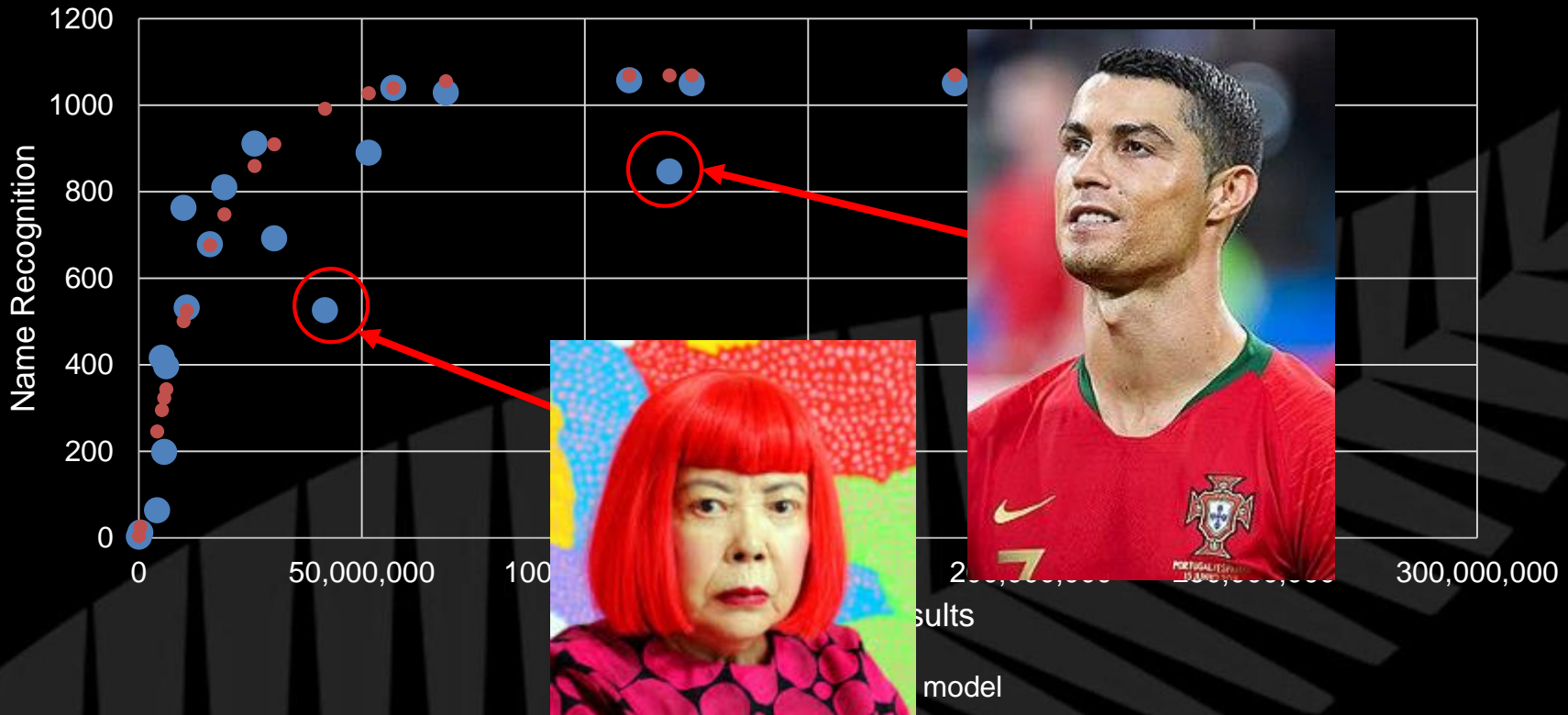- Knows Person: $r^2$ = 0.769
- Face Recognition: $r^2$ = 0.723

# Using Google search results to measure fame

# Google search results to measure fame



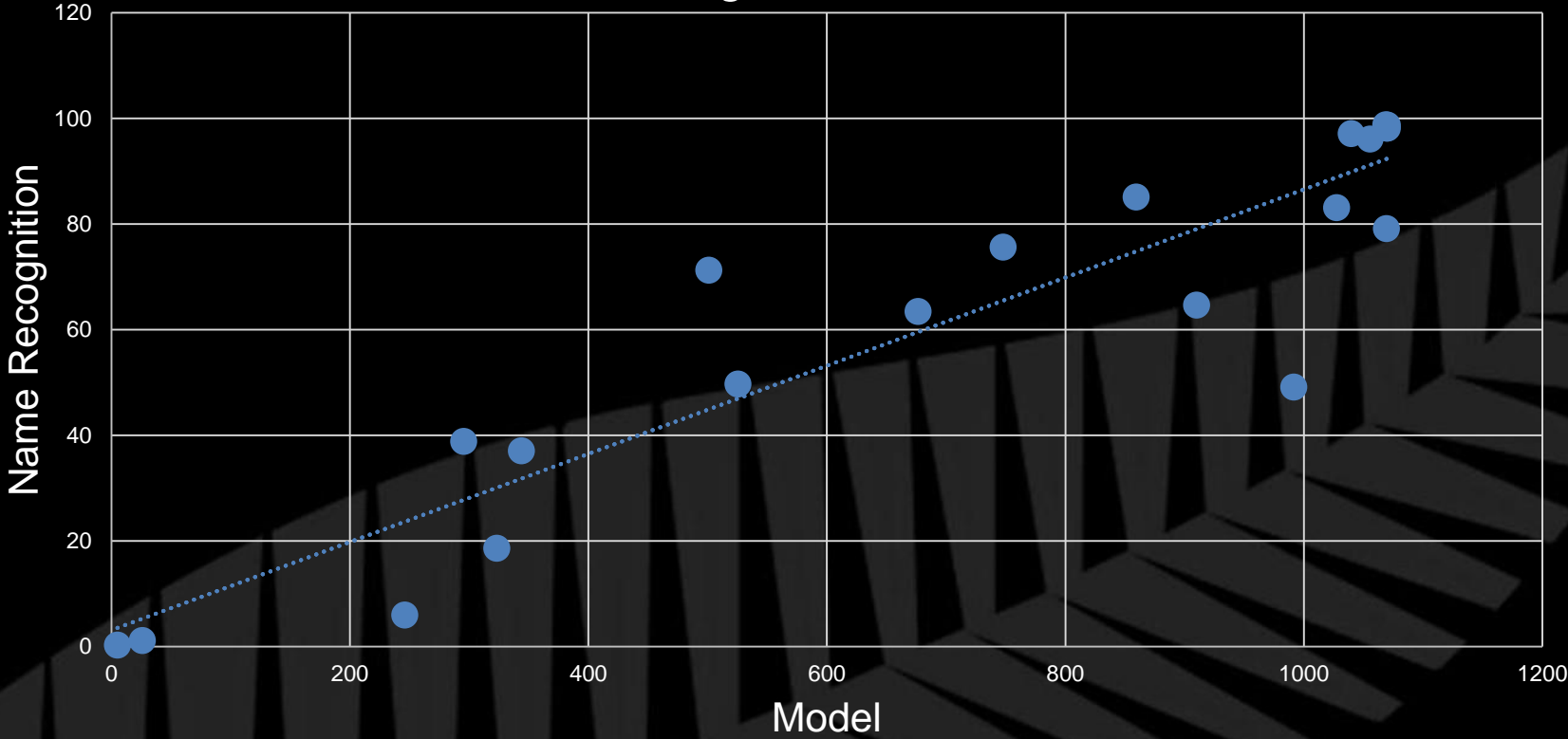Name recognition vs Google search results

1070-1070*(2.72^(-"google search results"/16,000,000))=Fame

# Google search results to measure fame



Name recognition vs Model

$r^2 = 0.848$

# Google search results to measure fame

1070-1070*(2.72^(-"google search results"/16,000,000))

1,070 ÷ 100 = 0.0934

So...

(1070-1070*(2.72^(-"google search results"/16,000,000)))=Fame
x0.0934 = Fame percentage

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# People from survey fame percentages

| Rank | Famous People | Fame Score |
|------|---------------|------------|
| 1 | Donald Trump | 99.94% |
| 2 | Beyoncé | 99.94% |
| 3 | Katy Perry | 99.9% |
| 4 | Cristiano Ronaldo | 99.88% |
| 5 | Bill Gates | 99.84% |
| 6 | Elon Musk | 98.59% |
| 7 | Brad Pitt | 97.13% |
| 8 | Kendall Jenner | 95.97% |
| 9 | Gigi Hadid | 92.61% |
| 10 | Emmanuel Macron | 85.01% |

# People from survey fame percentages

| Rank | Famous People | Fame Score |
|------|---------------|------------|
| 11 | Chris Hemsworth | 80.28% |
| 12 | Banksy | 69.86% |
| 13 | John Green | 63.2% |
| 14 | Pippa Middleton | 49.08% |
| 15 | Jeff Bezos | 46.8% |
| 16 | Jacob Sartorius | 32.12% |
| 17 | Tiffany Haddish | 30.19% |
| 18 | Ralph Fiennes | 27.61% |
| 19 | Yayoi Kusama | 23% |
| 20 | Bella Forrest | 2.48% |
| 21 | Mark A. Milley | 0.48% |

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# Other peoples fame percentages

| People | Search Results | Fame Score |
|---|---|---|
| Jacinda Ardern | 1,650,000 | 9.8% |
| John Key | 1,020,000 | 6.18% |
| Lydia Acton | 3,350 | 0.02% |
| Mike Pence | 11,800,000 | 52.16% |
| Angelina Jolie | 123,000,000 | 99.9% |
| Pope Francis | 23,200,000 | 76.52% |
| Murray Chisholm | 5,680 | 0.04% |
| Steve Easterbrook | 70,900 | 4.33% |
| Chris Pratt | 22,800,000 | 75.93% |
| Barack Obama | 91,200,000 | 99.60% |
| Pewdiepie | 68,100,000 | 98.52% |

# Conclusion

*Some people in the modern World are considered 'famous' since they frequently appear in the news, TV, and social media.*

*Suggest a quantitative parameter of such 'fame', and build lists of persons that are sorted according to this parameter.*

- The best measure of this is google search results
  - (1070-1070*(2.72^(-C3/16000000)))*0.0934=Fame%

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# Bibliography

- https://www.reddit.com/r/dataisbeautiful/comments/5700sj/octhe_results_of_the_reddit_demographics_survey/

- https://www.wordtracker.com/

- https://keywordseverywhere.com/

- http://www.neatorama.com/2013/08/13/Can-Fame-Be-Measured-Quantitatively/

- https://www.reddit.com/r/samplesize

- https://www.google.com/sheets/about/


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