

Using Data Science for Social Good

Rayid Ghani

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Impaired Attention

Lack of Motor Skills

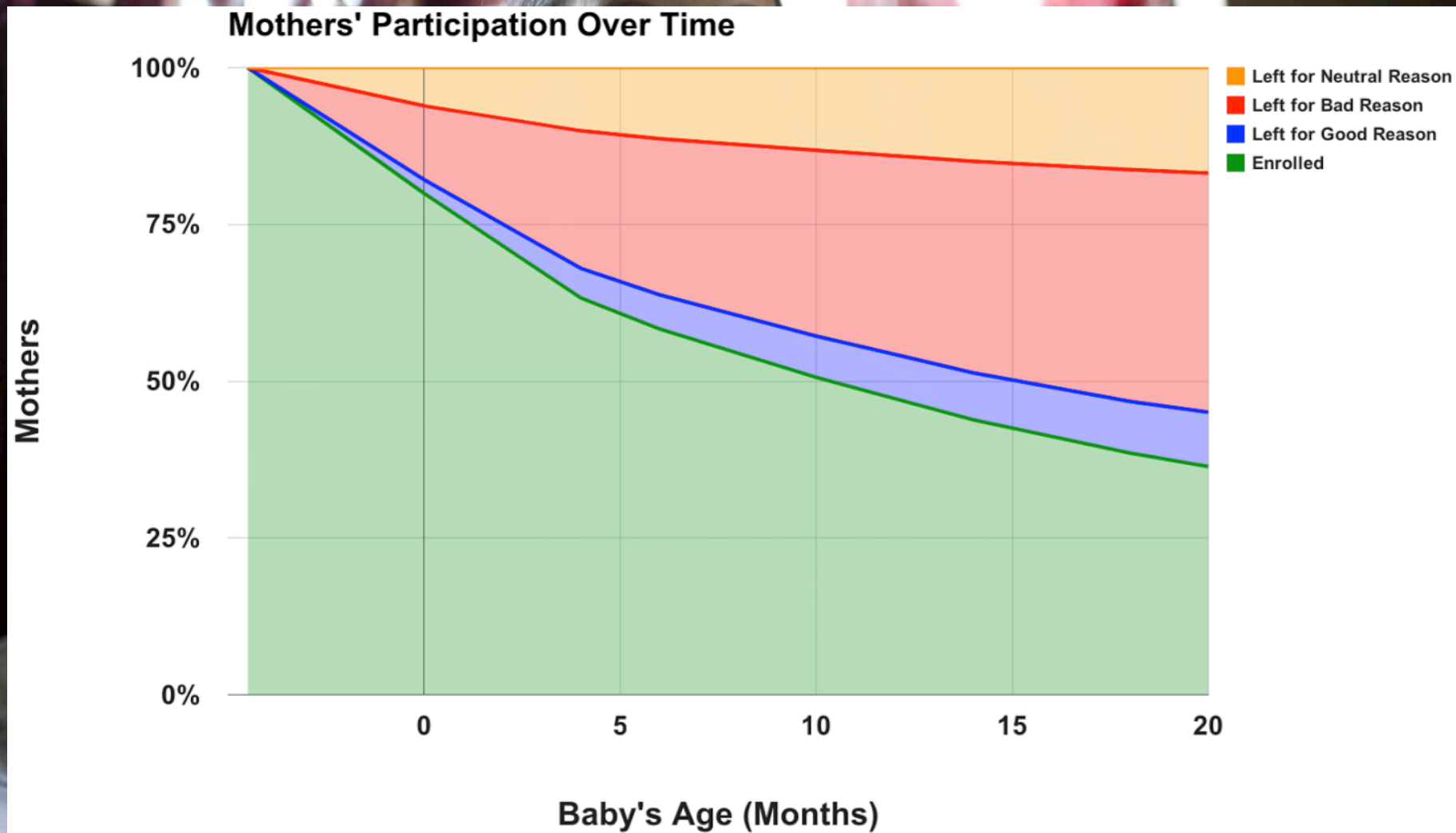
Hearing Loss

Learning Disability

Lower IQ

Memory Problems





WHO IS DROPPING OUT?



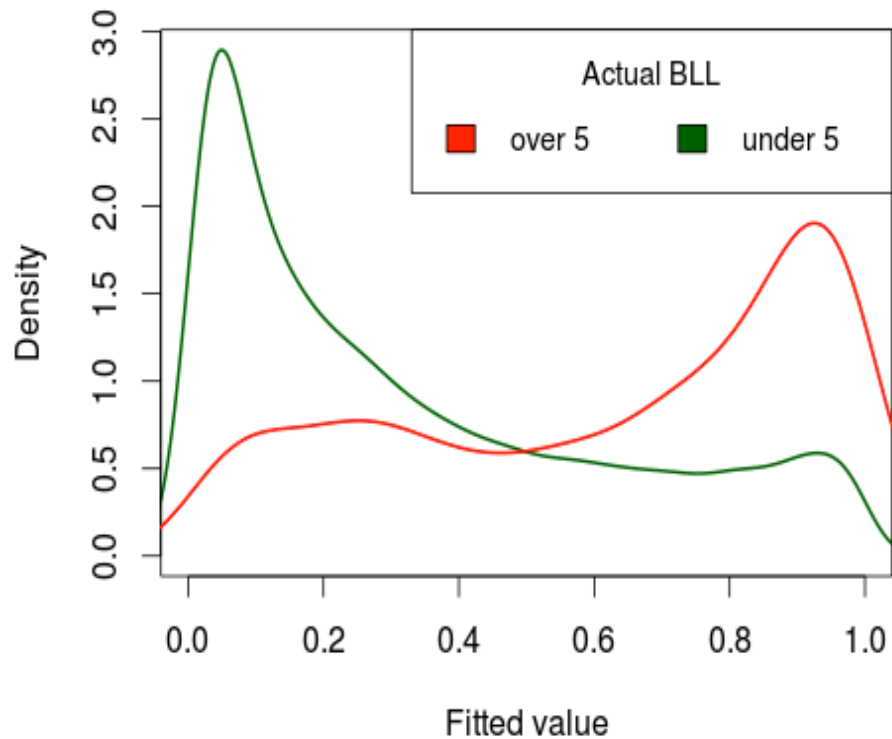
EVERY YEAR, 1.3 MILLION STUDENTS DROP OUT OF SCHOOL.

7,000 EVERY DAY
OF SCHOOL **OR** **1** EVERY 26
SECONDS

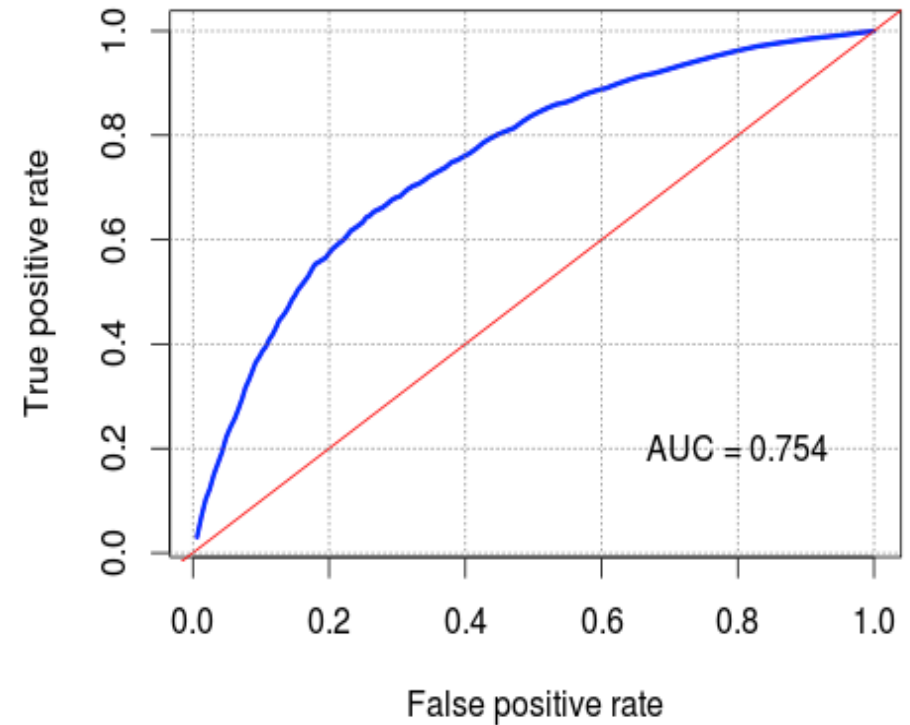


LEAD

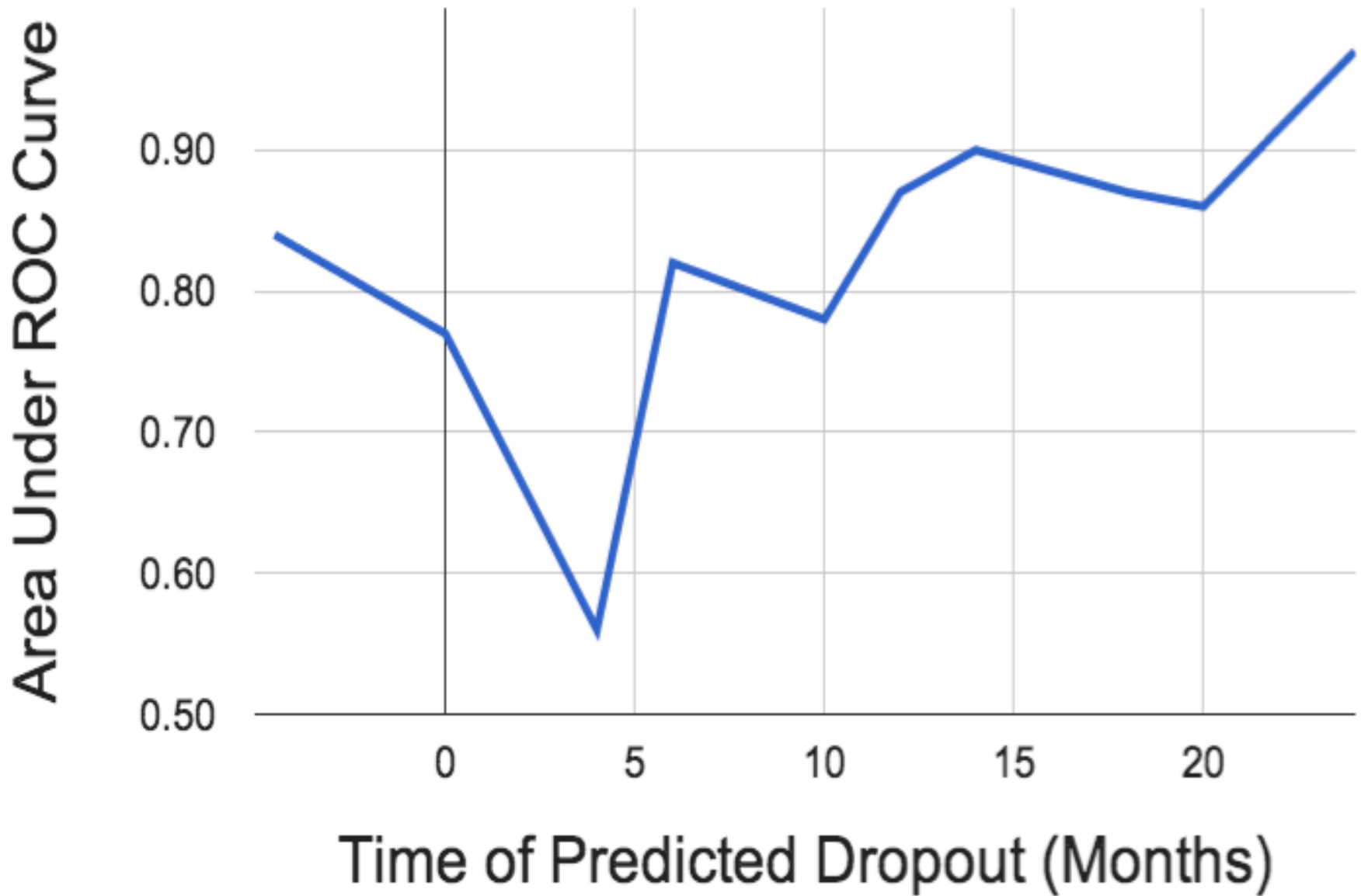
Density plot for predicted probabilities



ROC curve

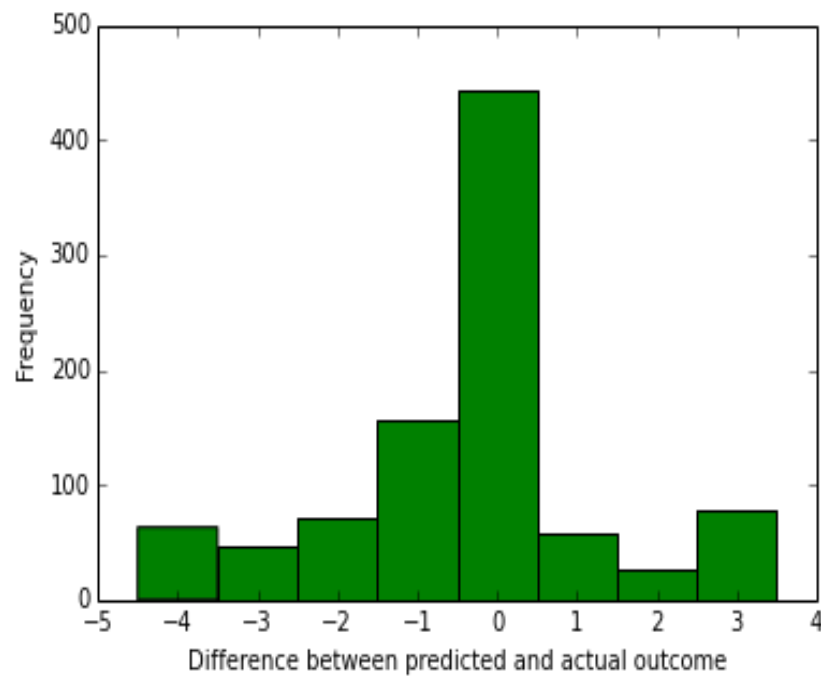


(Joe Brew, Alex Loewi, Subhabrata Majumdar, Andrew Reece, Eric Rozier)



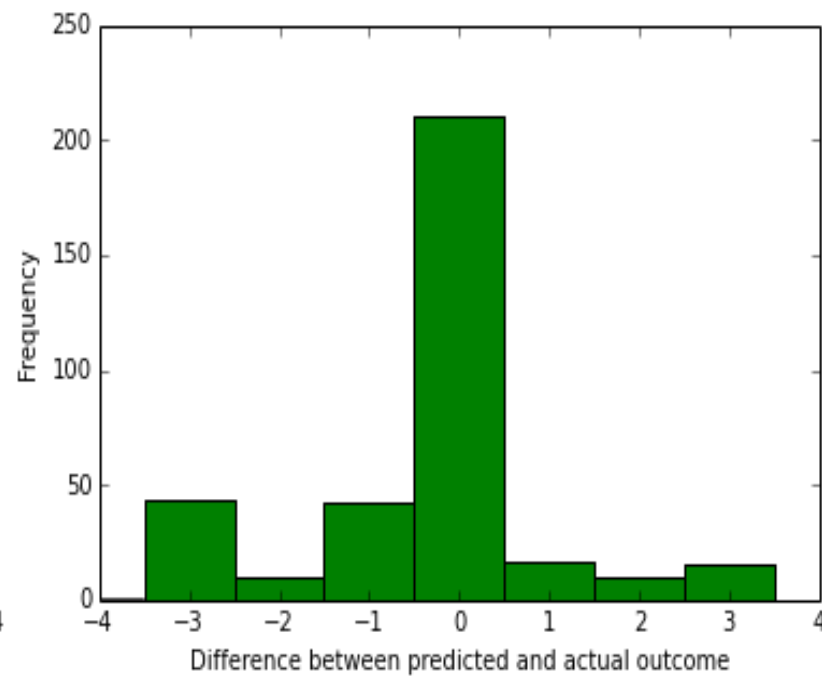
(Sarah Abraham, Jeff Lockhart, Sarah Tan, Rafael Turner, Young-Jin Kim)

Grade 8



Accuracy : 0.47
Mean Absolute Error : 1.14

Grade 9



Accuracy : 0.61
Mean Absolute Error : 0.79

(Everaldo, Aguiar, Nasir Bhanpuri, Hima Lakarajju, David Miller, Ben Yuhas)



Education/Training



**Collaborative Projects:
Real Projects, Real Data, Real Partners**



**Reusable Software
and Data**

The Eric & Wendy Ross Center for Data Science & Social Good

Summer Fellows Program

<http://dssg.uchicago.edu>

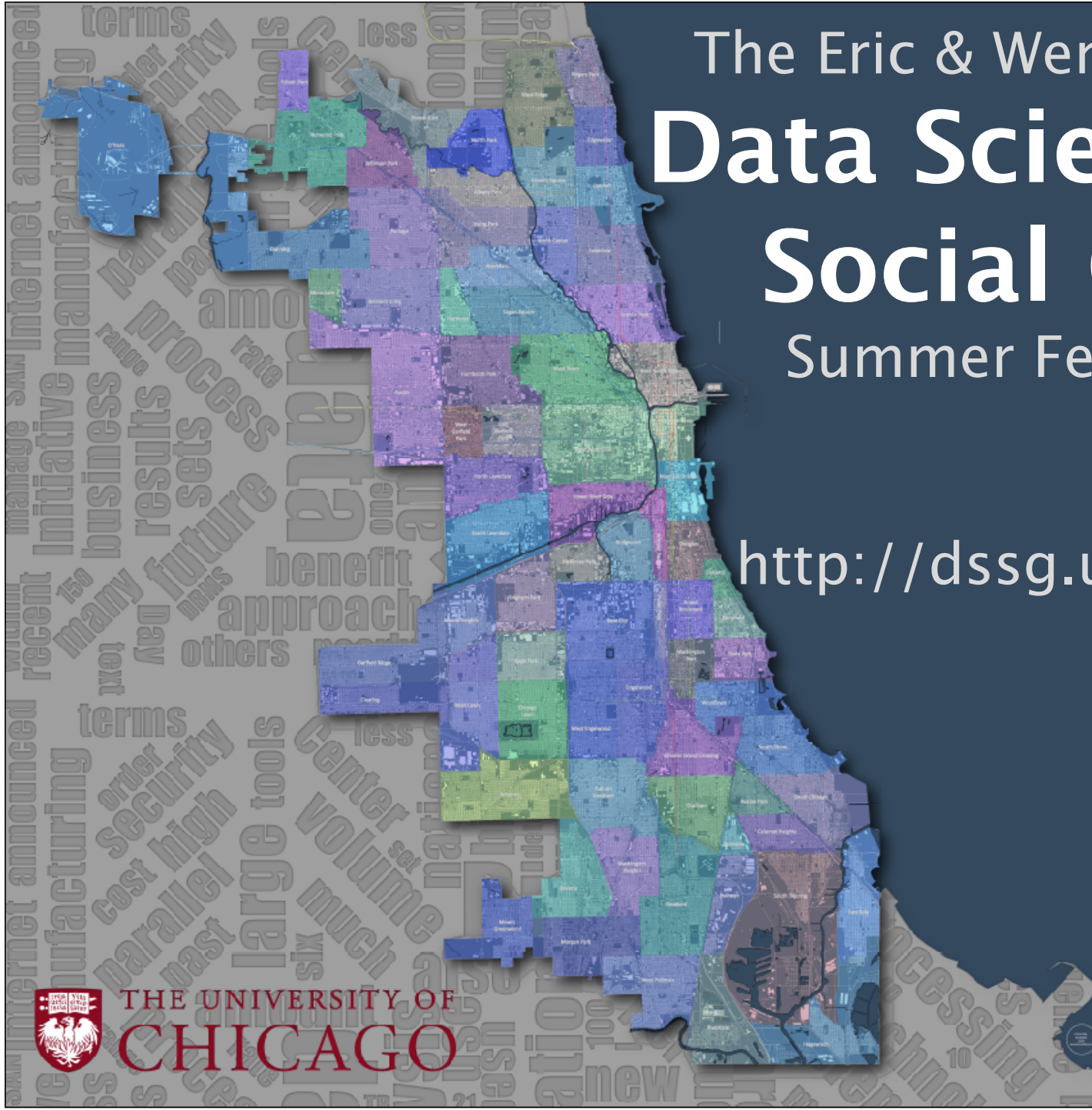
THE UNIVERSITY OF CHICAGO

The Eric & Wendy Moore Center for Data Science and Social Good

Summer Fellows

<http://dssg.uchicago.edu>

THE UNIVERSITY OF CHICAGO



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Data Science
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Summer Fellowship

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CHICAGO

Goal of the Fellowship

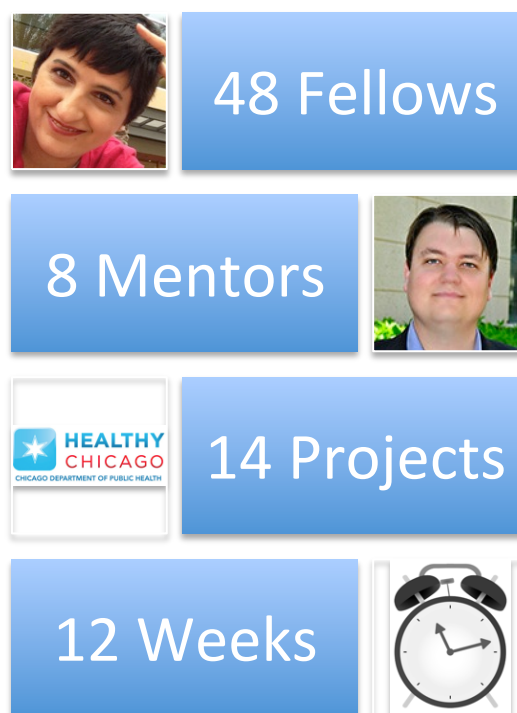
- Train the next generation of data scientists who care about and understand how to solve social problems
- Expose and train governments and non profits to better use data to make better decisions
- Seed a community of people and organizations working together to make an impact

Fellowship by the Numbers

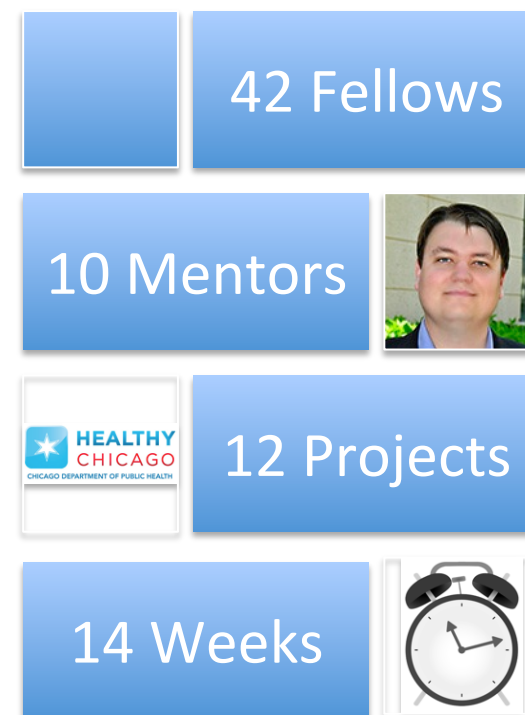
2013



2014



2015



Fellows

~1800 Applicants 45 countries ~300 Universities

126 fellows

Computer Scientists
Statisticians

Social Scientists

Public Policy

(and other computational and quantitative fields)

CMU

U. of Chicago

Northwestern

Harvard

MIT

Stanford

Princeton

ITAM

Cornell

Yale

Villanova

Ohio State

USC

U Penn

Notre Dame

U of Minnesota

U of Michigan

Cambridge

McGill

UC Berkeley

U of Colorado

Swarthmore

Oberlin

UIUC

Emory

Duke

Fordham

Johns Hopkins

IIT

SAIC

NYU

Penn State

Simon Fraser

UC Santa

Barbara

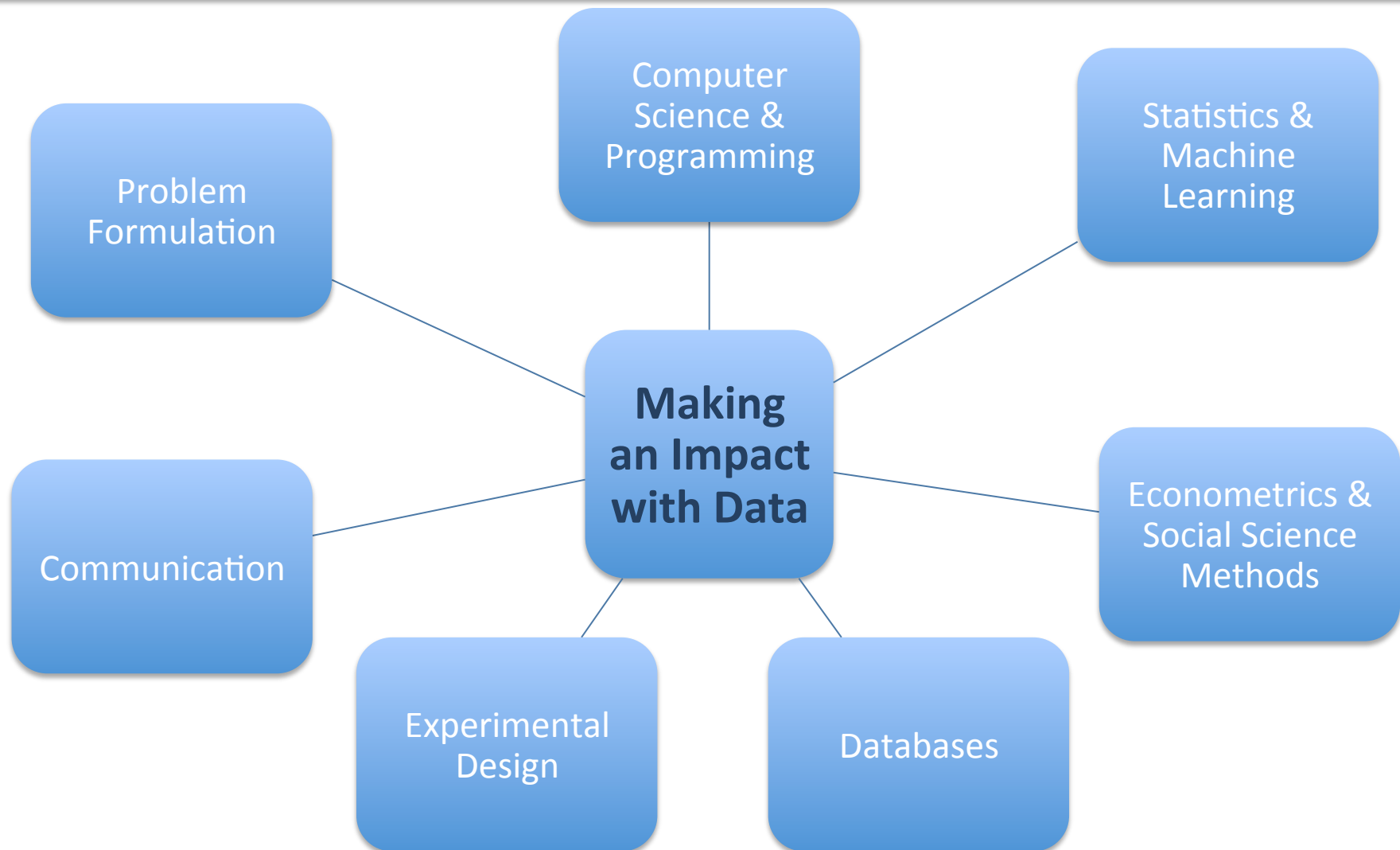
Project Partners



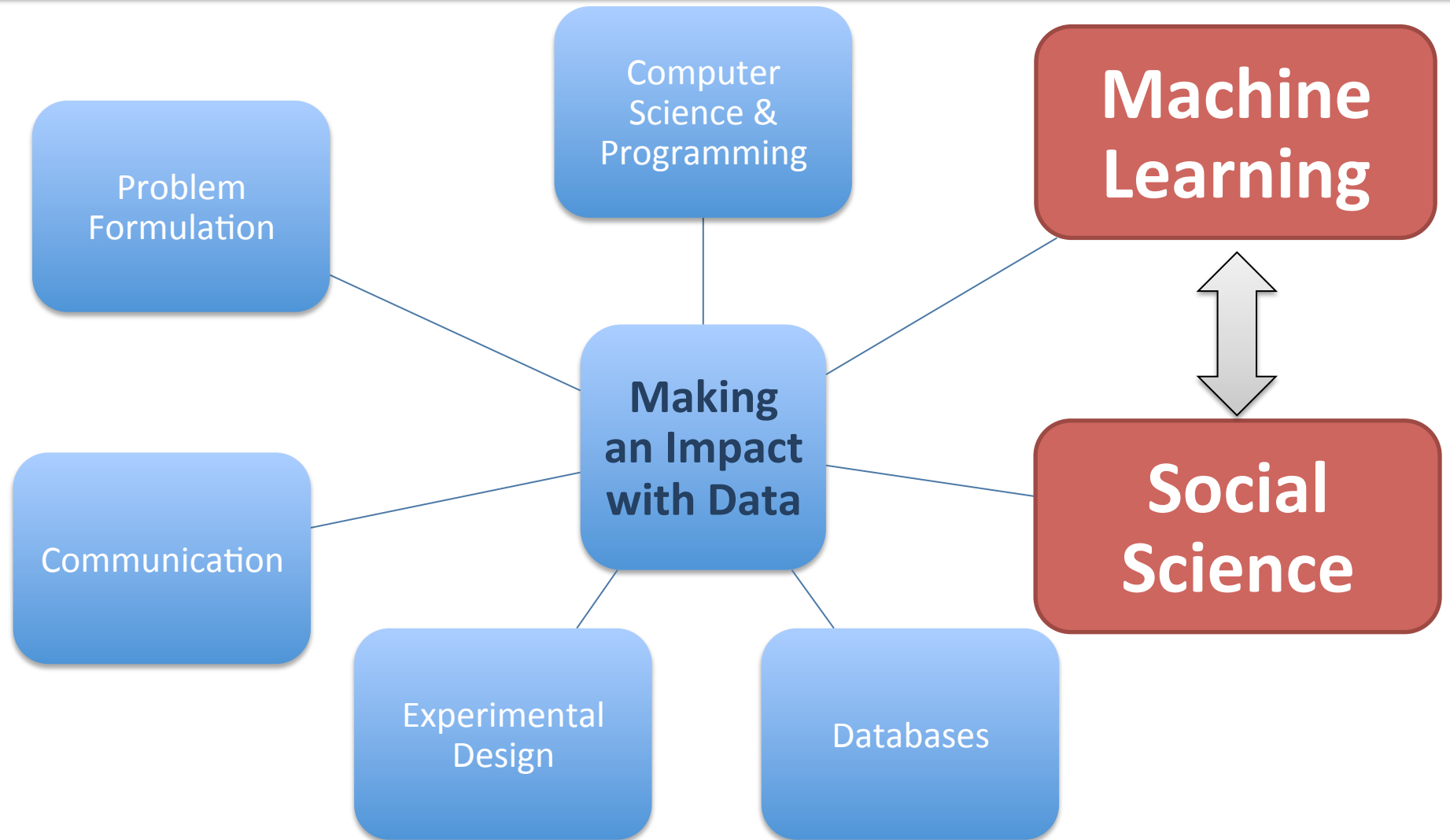
Rayid Ghani

@rayidghani

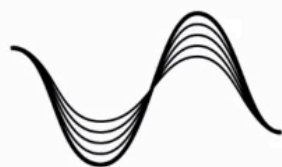
Creating Data Scientists who Care



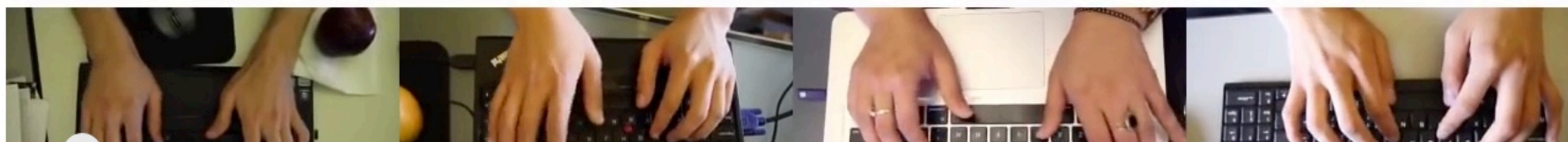
Critical Research Gaps



The Data Science for Social Good Summer Fellowship



The Eric & Wendy Schmidt
Data Science for Social Good
Summer Fellowship 2013



0:11 / 5:08



YouTube



Rayid Ghani

@rayidghani

How to get involved

Students => Data Science Fellows

Recent PhDs => Apply to be Post-docs

Practitioners in Industry => Apply to be Visiting Data Scientists and/or Summer Mentors

Software Developers => Apply to be Data Engineers

Organizations with a problem and data => Apply to be a Project Partner

<http://dssg.uchicago.edu>

Contact Information

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For more information on the Summer Fellowship

<http://dssg.uchicago.edu>

For more information on the Center for Data Science &
Public Policy

<http://dspplab.com>