

DATA SCIENCE FOR SOCIAL GOOD

A blurred background image of a person with light hair and glasses, wearing a green hoodie, looking down at something in their hands.

THE BEST MINDS OF MY GENERATION
ARE THINKING ABOUT HOW TO MAKE
PEOPLE CLICK ADS. THAT SUCKS.

— Jeff Hammerbacher (Co-founder Facebook)

SOCIAL ORGANIZATIONS NEED TO
ALLOCATE SCARCE RESOURCES FOR
MAXIMUM IMPACT

- identifying supporters likely to donate
- predicting where services will be needed
 - predicting impact of campaigns
 - forecasting trends and changes

BASICALLY REGRESSION PROBLEMS

Social organizations often don't have

DATA SCIENTISTS

WHAT IF DATA SCIENTISTS WOULD
DONATE
THEIR SKILLS?



This is already happening...*

* ...but not in Germany (afaik)

A GUIDED TOUR THROUGH THE DATA SCIENCE FOR SOCIAL GOOD MOVEMENT

DSSG FELLOWSHIP

- supported by the Eric & Wendy Schmidt Foundation
 - 6 month fellowship
 - taking applications for 3rd year
 - Partners: NGOs, Governments

<http://dssg.io/>

DSSG EXAMPLE

Partner: Nurse-Family Partnership

[http://dssg.uchicago.edu/2014/08/27/nfp-
undefinable-unmeasurable.html](http://dssg.uchicago.edu/2014/08/27/nfp-undefinable-unmeasurable.html)

DSSG ATLANTA

<http://dssg-atl.io/>

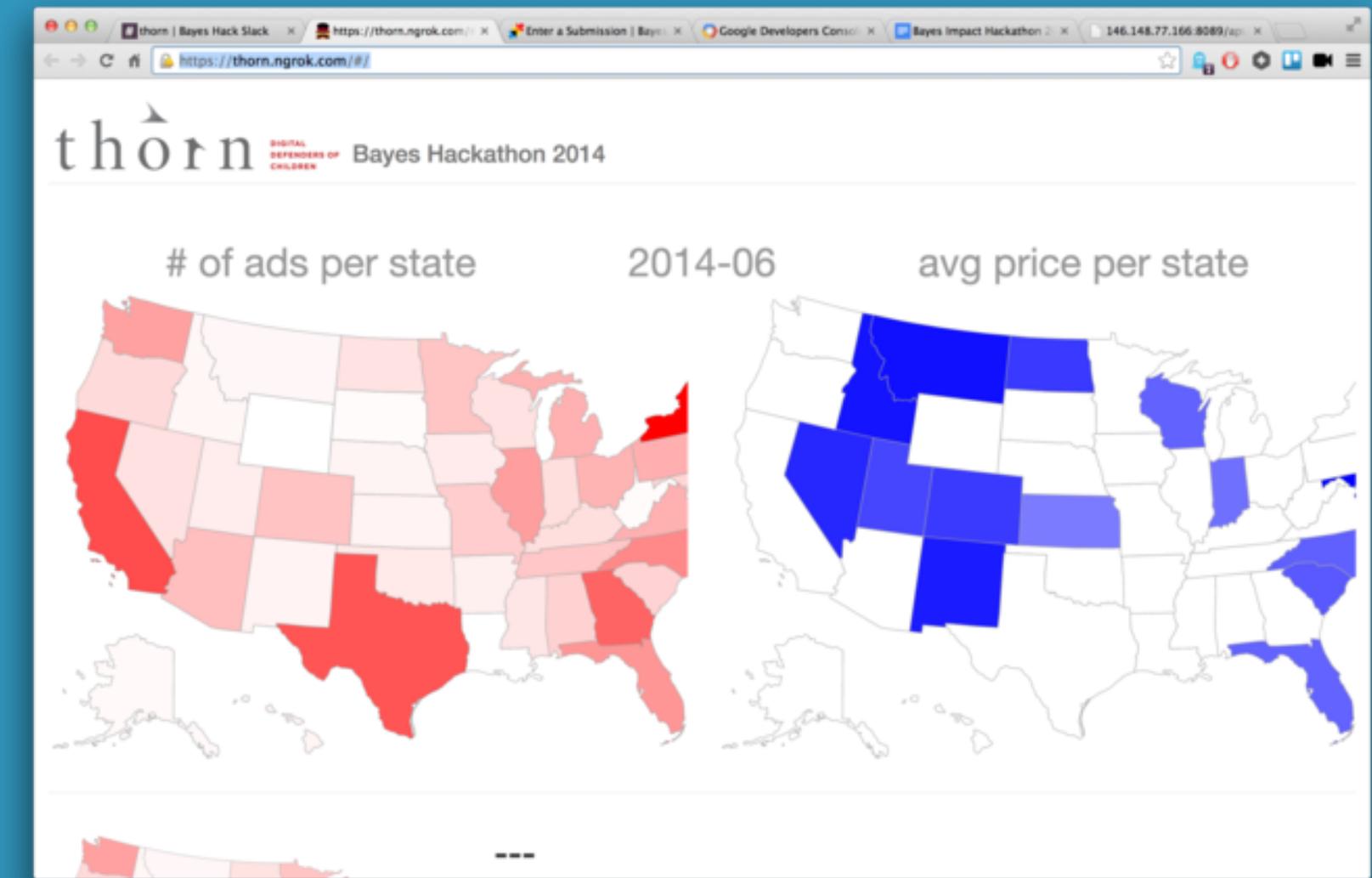
BAYES IMPACT (YC-BACKED)

Bayes Impact is a nonprofit that deploys data scientists to solve big social problems with civic and nonprofit organizations

- 12-month Fellowship
- Example project: Dispatch-optimization for emergency responders

BAYES HACK NOV 15TH

[http://
bayeshack.challengepost.com
/submissions](http://bayeshack.challengepost.com/submissions)



THORN FELLOWSHIP

<http://www.wearethorn.org/thorn-innovation-lab/>

DRIVENDATA

<http://www.drivendata.org/>

(<https://www.kaggle.com/c/kdd-cup-2014-predicting-excitement-at-donors-choose>)

KDD 2014

had a

WORKSHOP ON DATA SCIENCE FOR SOCIAL GOOD

DATAKIND

We're tackling the world's biggest problems through data science.

— <http://www.datakind.org>

DataKind connects charities with data scientists by organizing two-day data dives where those data scientists help solving the charities' data problems.



Jake Porway at TEDxMontreal

ANALYZING POVERTY THROUGH SATELLITE IMAGERY

DataKind helped GiveDirectly - an NGO, die bedingungslos Geld an bedürftige Haushalte in Kenia und Uganda überweist¹ - geholfen, besonders arme Dörfer durch die automatisierte Analyse von Satellitenbildern zu identifizieren².



¹ http://www.ted.com/talks/joysunshouldyoudonate_differently

² <http://www.datakind.org/projects/using-the-simple-to-be-radical/>

VIEW THE PRESENTATION
OR READ THE PAPER



EARLY WARNING SYSTEM FOR HUMAN RIGHTS ABUSES

Um zu helfen, die vielen Nachrichten, die über Amnesty Internationals Urgent Action Network eingehen, zu priorisieren, hat DataKind ein Vorhersagemodell erstellt, welches die Nachrichtentexte analysiert, um auf das Eskalationspotential der Situation zu schließen.³⁴

³ <http://www.datakind.org/projects/using-predictive-analytics-to-prevent-human-rights-abuses/>

⁴ http://www.washingtonpost.com/business/on-it/amnesty-international-considers-using-big-data-to-predict-human-rights-violations/2013/11/22/3f4f1a1e-5388-11e3-a7f0-b790929232e1_story.html

ANALYSE DER GEOGRAFISCHEN UNTERVERSORGUNG MIT HOSPIZEN

TODO⁵

⁵ <http://www.datakind.org/finding-30000-missing-children/>

Most of these projects have been tackled by volunteers on 2-day data dives.

WHAT'S A
DATA DRIVE!

VORHER: VORBEREITUNG DER DATEN

(durch freiwillige Data Scientists in Zusammenarbeit mit der Organisation – Vorlauf bis zu zwei Monate)

- Anonymisierung/Pseudonymisierung
 - Säuberung/Fehlerbereinigung
- Sicherstellen der Maschinenlesbarkeit der Daten-Formate

VORHER: VORBEREITUNG DER FRAGESTELLUNG

Daten offenbaren nicht auf magische Weise ihre Geheimnisse. Die richtigen Fragen müssen vorher gestellt werden, damit eine Analyse beim Data Dive Antworten liefern kann.¹⁰

¹⁰ <https://hbr.org/2013/03/you-cant-just-hack-your-way-to/>

DER DATA DIVE

- Definition von überprüfbaren Metriken
 - Vorhersagemodelle
 - Visualisierungen

NACHHER: IMPLEMENTIERUNG

TODO

NACHHER: IMPACT-ANALYSE

TODO

There is currently no organization in Germany comparable to DataKind. We want to change that.

WHO WE ARE?

WE

- Daniel Kirsch
- Marit Brademann
- You?

SUPPORTERS

- Klaas Bollhöfer,
The Unbelievable Machine Company
- Adam Drake,
Chief Data Scientist, Zanox

WHAT WE NEED

WE NEED PROBLEMS

The international of the Data Science for Social Good-movement shows data scientists are eager to donate their skills.

WE NEED DATA AMBASSADORS (HOW DATAKIND CALLS THEM)

To prepare data for data dives and help with the implementation afterwards

KONTAKT

Daniel Kirsch
`mail@danielkirs.ch`
`@kirel`

No website yet... Need a landing page? TODO

LINKS:

- <http://www.nominettrust.org.uk/knowledge-centre/articles/big-data-and-social-organisations>
 - <http://datakind.org>
 - <http://dssg.io>
 - <http://bayesimpact.org>
- <https://www.facebook.com/notes/facebook->

ATTRIBUTION

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