Prof. Alex Pentland, MIT

Big Data: Customers not Products

So:

How can we predict customer behavior?
Personal Data!

Discovering Tribes
The Next Google - cover Newsweek

Big Data
Better Health

Ginger.io is a behavioral analytics platform that turns mobile data into health insights.
Open Source System: 1500+ research teams around the world

FunF:
Open Source Sensor Platform

Combining all layers of social networks, you our algorithm computes the optimal combined network for behavior change.

Information about behaviors

Optimal combined social network with the best prediction power

\[ G^{opt} = \sum_{k=1}^{U} \alpha_k G^{(k)} \]

User variance profile

\[ s_1, \ldots, s_U \]

Predicting App Downloads

65 young families, 12 months data

Using sensors in smart phones to obtain different type of social networks.

45% accuracy at predicting app downloads

Personal Data is the new `oil' of the internet...

but who owns this data?

Pan, Aharony, Pentland
The New Deal on Data

Proposed by Alex Pentland 2007

EU Data Human Rights
US Data Bill of Rights

First ‘best practice’ open source Trust Network implementation

In collaboration with
World Economic Forum
Telefonica
Telecom Italia

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Trust Networks
like the SWIFT inter-bank network

YOU

Personal Information
Questions and Answers

Legal ‘Shadow’ enforces
rights and obligations

Service Provider

Code IS Contract.

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openPDS

Only answers, not raw data

critical for safety for location, and other high-dimensional data

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Data from private companies and Provential Authority

Trentino Open Living Data Project (TOLD)

Application scenarios:
- **Mobility:**
  - Online efficient private traffic
  - Public transportation on the fly route balancing
- **Safety:**
  - Detection and support in dangerous situations (e.g. fires, avalanches, etc.)
- **Health:**
  - Recognition and prediction of epidemic spread
- **Urban & Local business planning:**
  - Understand economically depressed areas
  - Help companies to plan investment

- **A joint project between**

Data from individuals

Mobile Territorial Lab

- Understand the needs and the behaviour of users.
- Provide individuals mobile phone equipped with a sensing middleware to collect the data generated to be analyzed (starting community: young families with newborns)
- Short term outcomes:
  1. Developing and testing a new model of DATA OWNERSHIP
  2. Understanding the dynamics of people’s needs
  1. Understanding people’s interactions in the generated social networks

From Big Data to Big Money

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Forbes, 8/10, Mining Human Behavior