### MAKING SENSE OF THE INFORMATION IN THE REAL TIME WEB

Jurgen Van Gael (@jvangael)
Microsoft Research
Future of Social Networks - 2010



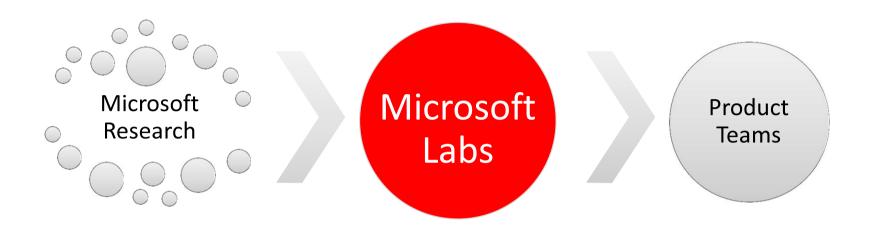
### Overview

- Future Social Experiences Labs
- The Real-Time Web
- Making Sense of Information
- Project Emporia

Why are we here and who are we?

**FUSE LABS** 

### Labs at Microsoft



Pushing the limits of technology

Proving or dis-proving concepts

Execution





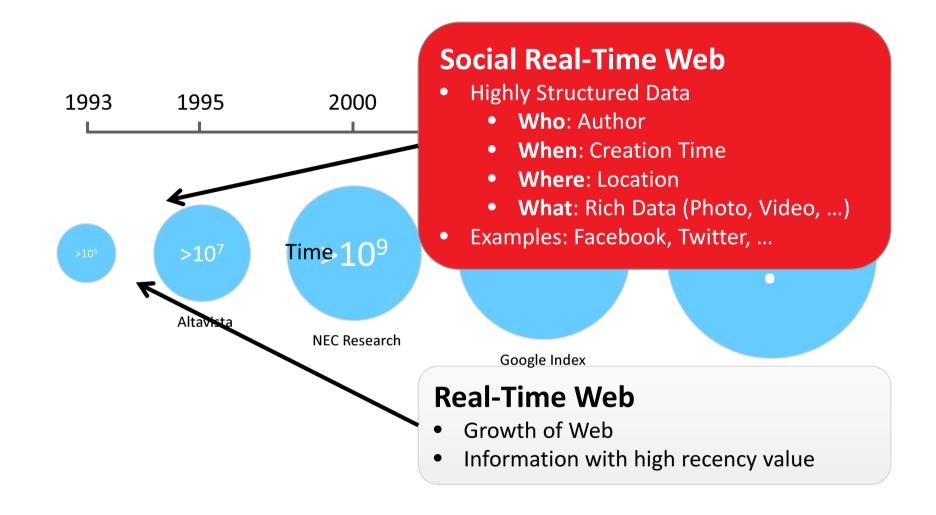




What is the real-time web and what is the problem?

### THE REAL-TIME WEB

### Information on the Web



### From Coverage to Relevance

### **World Wide Web**

### **Twitter**

### **Coverage Problem**

- Boolean Keyword Search
- Web Directories

### 22 1995 2007

### **Coverage Problem**

- Boolean Keyword Search
- Twitter Lists



### **Relevance Problem**

- Relevance filtering & ranking
- Web Search

### **Relevance Problem**

- Need for relevance filtering
- ???

## DEMO

### Twitter – Social Network or Microblog?

### Social Network

Asymmetric people relationship

Public is default

No rich media

### Content Consumer

> 190,000,000 monthly visitors

80% of Twitter users posting less than 10 tweets overall

40% of Twitter users have zero tweets!

### Content Growth

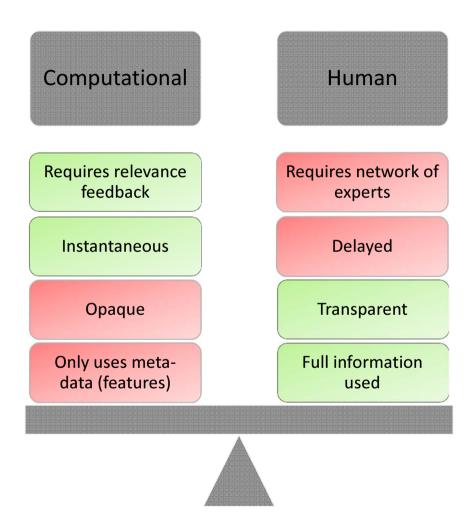
Twitter content doubles every 6 months

Existing users become more active

Authoring user base is stagnant



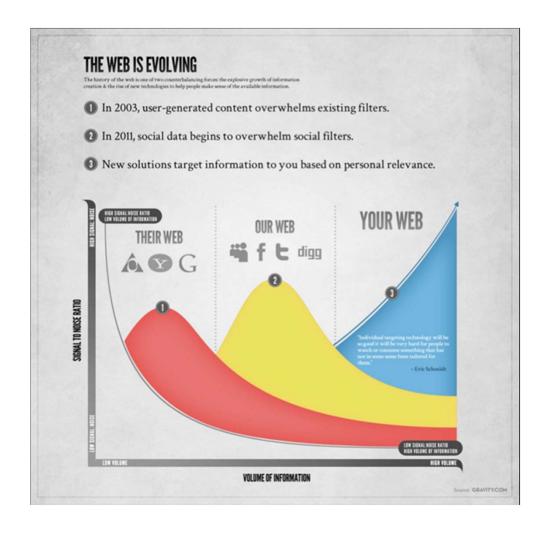
### Computational vs. Human Intelligence





### The Future Will Be Personalized

TechCrunch - 17/11/2010 - Amit Kapur

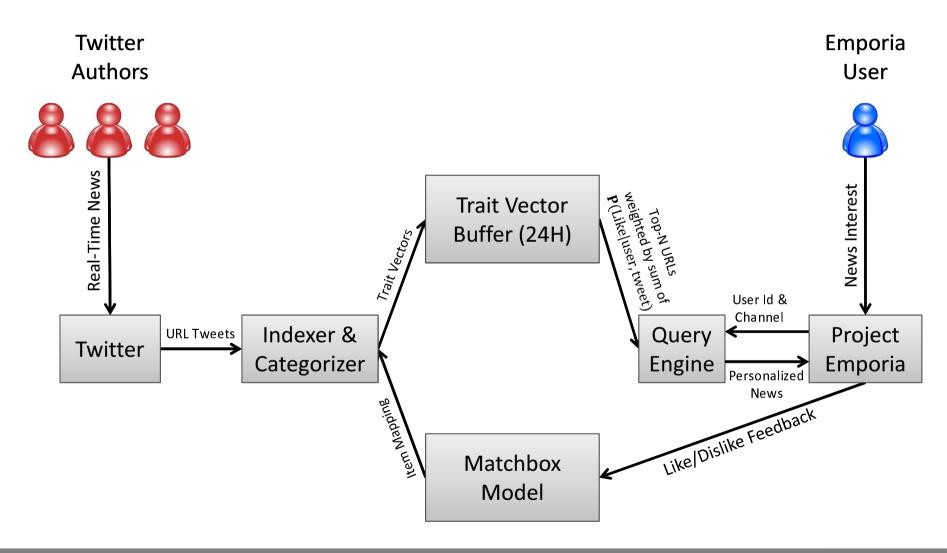


Open up the world of the social real time web.

### **PROJECT EMPORIA**

## DEMO

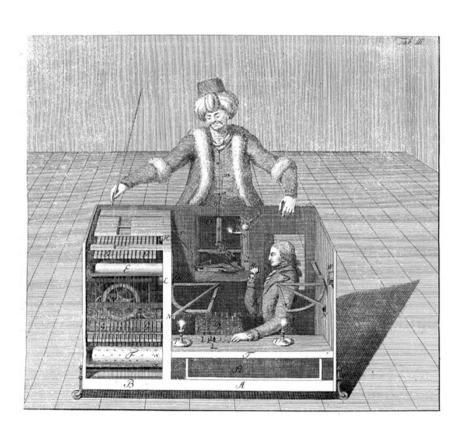
### Project Emporia Pipeline



Leveraging the Wisdom of the Crowd

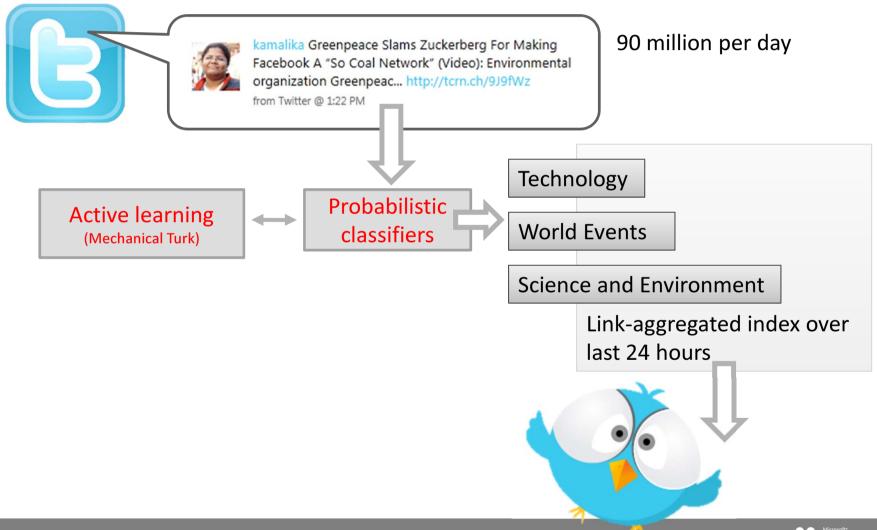
### **CLASSIFIER TRAINING**

### What is Mechanical Turk

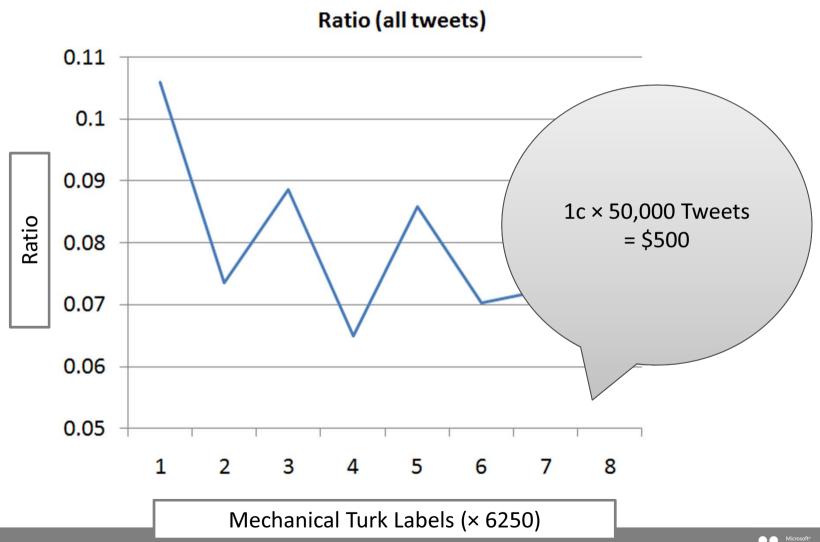


- Human Intelligence Task
- Pay per job (+bonus)
- √ Fast turnaround
- ✓ Large Marketplace
- Noisy Results
- Fraudsters

### In Project Emporia

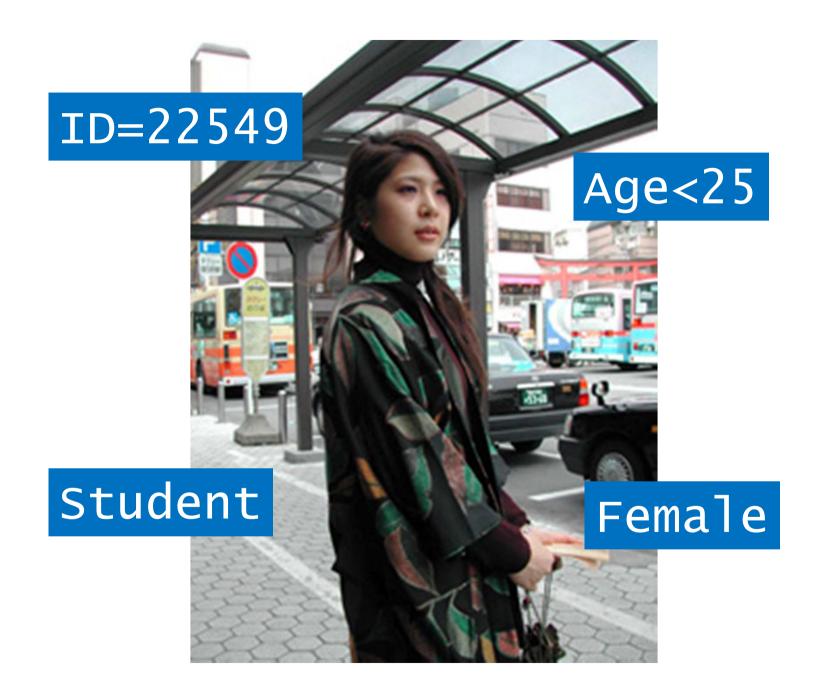


### Learning Performance



Crowdsourcing Relevance

### MATCHBOX RECOMMENDATIONS





### Training...





ID=22549

Age<25

Student

Female

Julia Roberts

Hugh Grant:

ID=5432 L

Comedy

Romance

FROM THE CREATORS OF BEAN AND TOUR WEEDINGS AND AT INSERTAL

### Prediction





ID=22549

Age<25

Student

Female

ID=9765

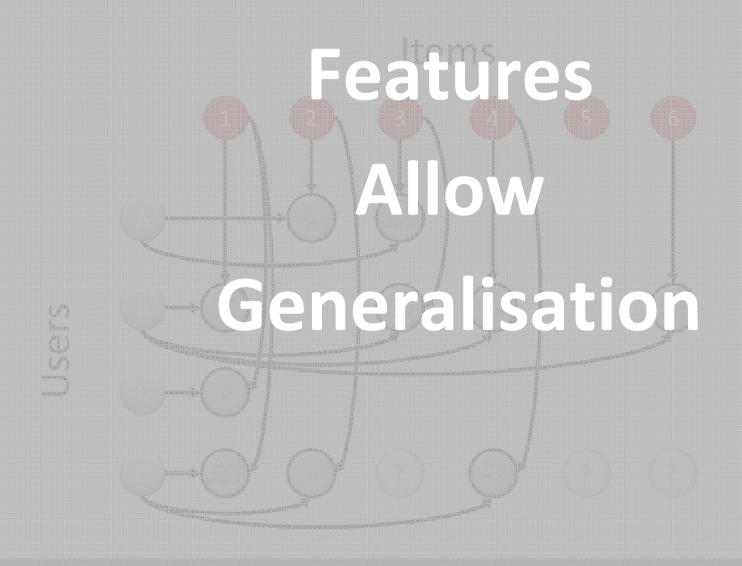
Eva Green

Daniel Craig

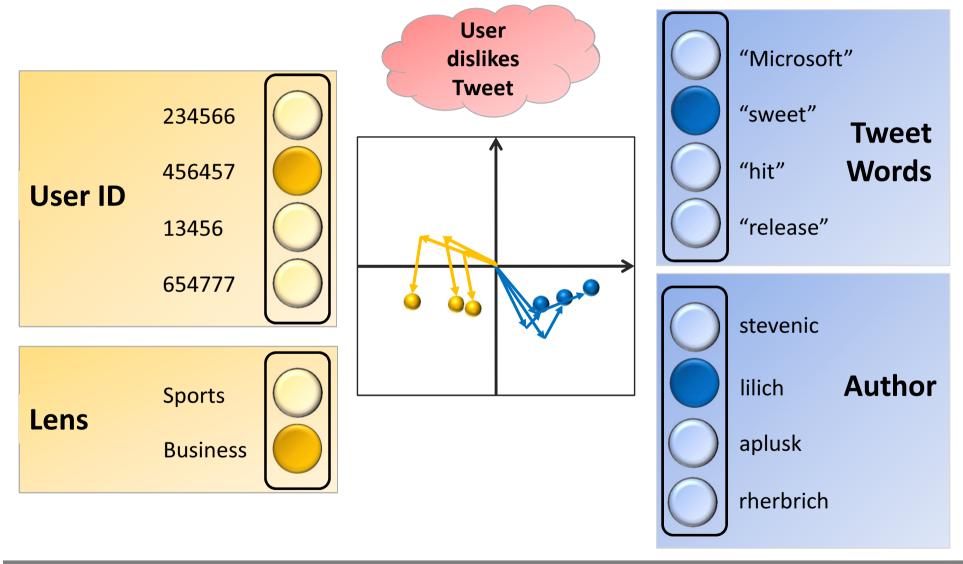
Action

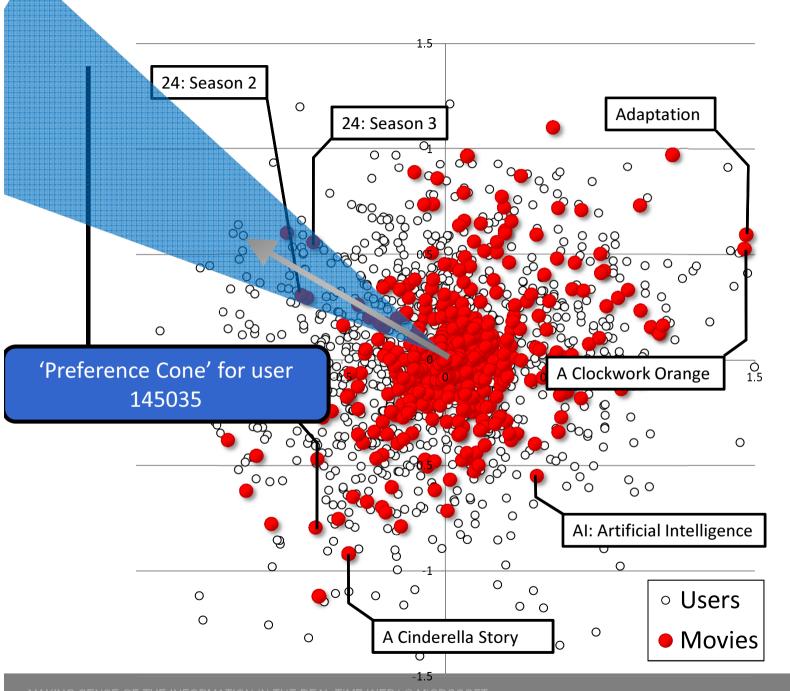


### Collaborative Filtering



### Recommender System: MatchBox





## User Item Trait Space

# **SUMMARY**

### Social Real-Time Web

- Pivotal moment relevance is the next big challenge
- Combining human and computational intelligence is key

### Project Emporia

- Alpha Release from Microsoft Research FUSE Labs
- Leverages the power of social networks:
  - Content Creation (Twitter, RSS)
  - Content Filtering (Mechanical Turk)
  - Content Recommendation (Emporia Users)

### Go play at www.projectemporia.com

### **Microsoft**®



