

# CS 4873-A: Computing and Society

Munmun De Choudhury | Associate Professor | School of Interactive Computing

# Week 9: Algorithmic Surveillance

March 14, 2021



EMMA WATSON TOM HANKS

# THE CIRCLE

KNOWING IS GOOD.  
KNOWING EVERYTHING IS BETTER.

4.28.17

NATIONAL



# Facebook Increasingly Reliant on A.I. To Predict Suicide Risk

November 17, 2018 · 5:00 AM ET

Heard on [All Things Considered](#)



MARTIN KASTE



4-Minute Listen

+ PLAYLIST



Privacy and ethics in the  
backdrop of surveillance



# Promises of technology and the Internet

Engineering the public: Big data, surveillance  
and computational politics  
by Zeynep Tufekci

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However, big data also needs to be examined as  
a political process involving questions of power,  
transparency and surveillance

*Computational politics* by  
Tufekci et al.

Computational politics:  
Contrasting yesterday and today

# Engineering the Public - Tufekci

1. The rise of big data
2. The shift away from demographics to individualized targeting
3. The opacity and power of computational modeling
4. The use of persuasive behavioral science
5. Digital media enabling dynamic real-time experimentation
6. The growth of new power brokers who own the data or social media environments

### 3. Power of computational modeling

## 4. Behavioral science



**The Cambridge  
Analytica Files**  
Cambridge Analytica

# Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach

**Whistleblower describes how firm linked to former Trump adviser Steve Bannon compiled user data to target American voters**

- **'I made Steve Bannon's psychological warfare tool': meet the data war whistleblower**
- **Mark Zuckerberg breaks silence on Cambridge Analytica**



## 5. Experimental science in real-time environments

## 6. Power of platforms and algorithmic governance

# 6. Power of platforms and algorithmic governance

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Letter | Published: 12 September 2012

## A 61-million-person experiment in social influence and political mobilization

Robert M. Bond, Christopher J. Fariss, Jason J. Jones, Adam D. I. Kramer, Cameron Marlow, Jaime E. Settle & James H. Fowler

*Nature* **489**, 295–298(2012) | [Cite this article](#)

**10k** Accesses | **872** Citations | **1571** Altmetric | [Metrics](#)

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### Editorial Summary

#### An off-line side to online social networking

Online social networks are everywhere. They must be influencing the way society is developing, but hard evidence is scarce. For... [show more](#)

Avoiding being subject to computational politics?

# Two case studies

# Automatic Crime Prediction using Events Extracted from Twitter Posts

Xiaofeng Wang, Matthew S. Gerber, and Donald E. Brown

Department of Systems and Information Engineering, University of Virginia  
{xw4u,msg8u,brown}@virginia.edu

## Once Upon a Crime: Towards Crime Prediction from Demographics and Mobile Data

Andrey Bogomolov  
University of Trento,  
Telecom Italia SKIL Lab  
Via Sommarive, 5  
I-38123 Povo - Trento, Italy  
andrey.bogomolov@unitn.it

Nuria Oliver  
Telefonica Research  
Torre Telefonica, Diagonal 00  
Barcelona, Spain  
nuriao@tid.es

Bruno Lepri  
Fondazione Bruno Kessler  
Via Sommarive, 18  
I-38123 Povo - Trento, Italy  
lepri@fbk.eu

Fabio Pianesi  
Fondazione Bruno Kessler  
Via Sommarive, 18  
I-38123 Povo - Trento, Italy  
pianesi@fbk.eu

Jacopo Staiano  
DISI, University of Trento  
Via Sommarive, 5  
I-38123 Povo - Trento, Italy  
staiano@disi.unitn.it

Alex (Sandy) Pentland  
MIT Media Lab  
20 Ames Street  
Cambridge, MA, USA  
pentland@mit.edu

# POLICING THE FUTURE

In the aftermath of Ferguson, St. Louis cops embrace crime-predicting software

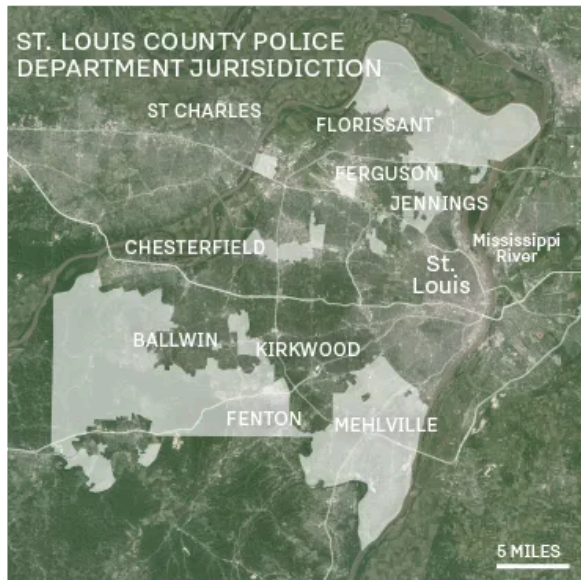
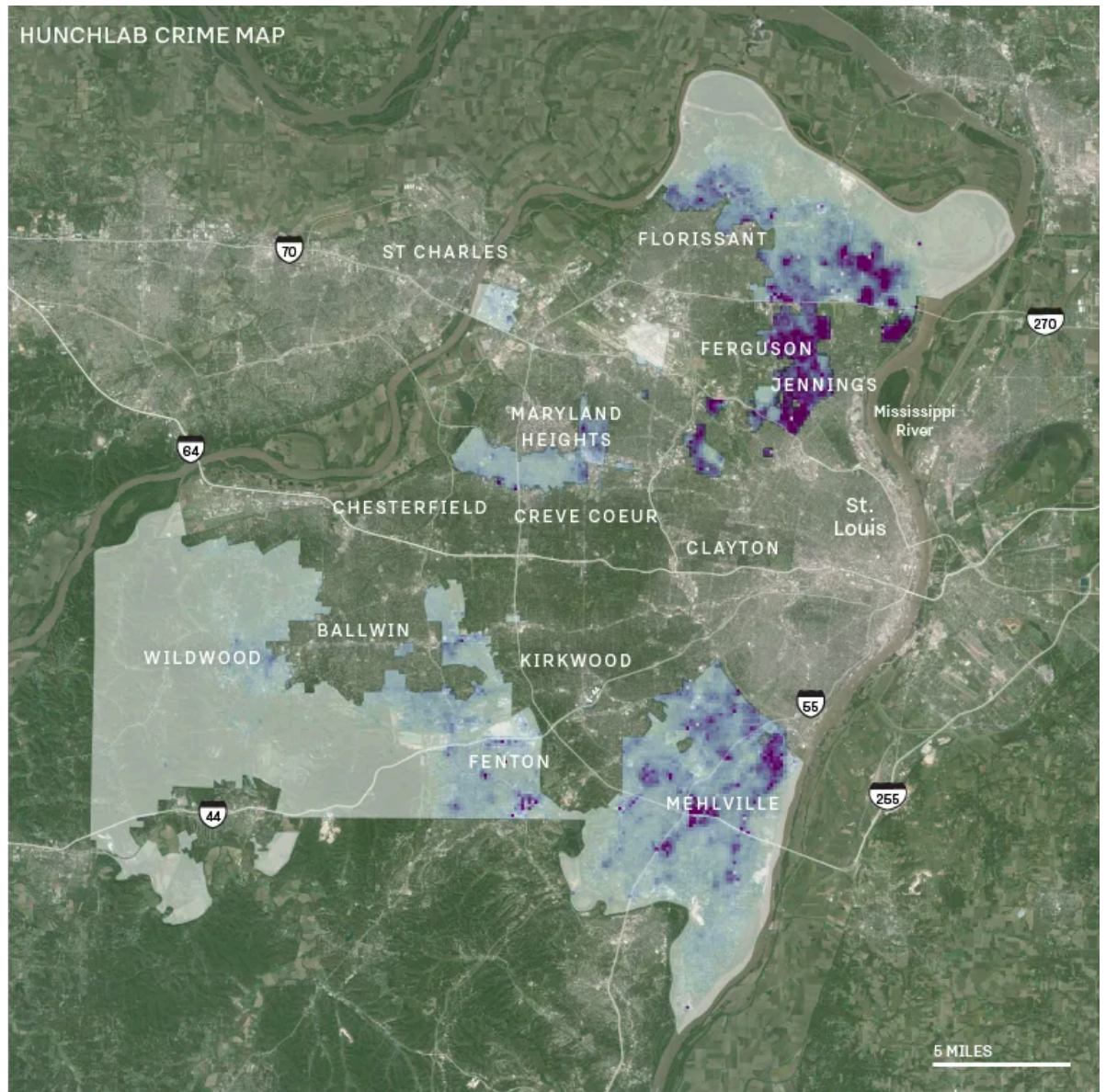
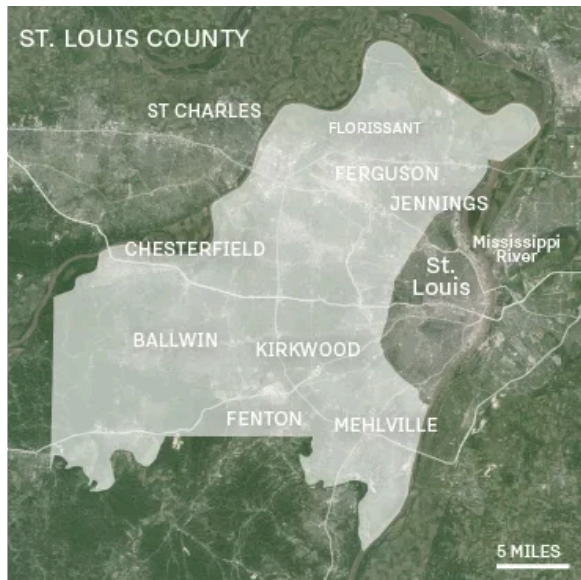
**By Maurice Chammah, with additional reporting by Mark Hansen**

**Photography by Whitney Curtis**

**Just over a year** after Michael Brown's death became a focal point for a national debate about policing and race, Ferguson and nearby St. Louis suburbs have returned to what looks, from the outside, like a kind of normalcy. Near the Canfield Green apartments, where Brown was shot by police officer Darren Wilson, a sign reading "Hands Up Don't Shoot" and a mountain of teddy bears have been cleared away. The McDonald's on West Florissant Avenue, where protesters nursed rubber bullet wounds and escaped tear gas, is now just another McDonald's.

Half a mile down the road in the city of Jennings, between the China King restaurant and a Cricket cell phone outlet, sits an empty room that the St. Louis County Police Department keeps as a substation. During the protests, it was a war room, where law enforcement leaders planned their responses to the chaos outside.







# The Ethical Problem...

Do you think use of softwares like HunchLab can indeed minimize unjust police brutality incidents toward people of color?

Technology

# Colleges are turning students' phones into surveillance machines, tracking the locations of hundreds of thousands

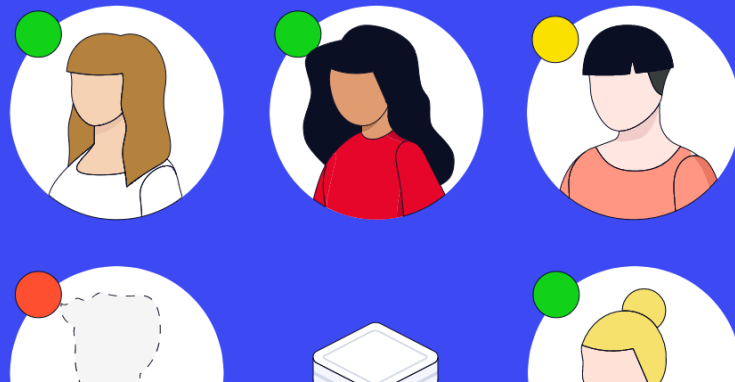
Solutions

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An automated  
attendance  
monitoring and  
early alerting

# StudentLife: Assessing Mental Health, Academic Performance and Behavioral Trends of College Students using Smartphones

Rui Wang<sup>†</sup>, Fanglin Chen<sup>†</sup>, Zhenyu Chen<sup>†</sup>, Tianxing Li<sup>†</sup>, Gabriella Harari<sup>‡</sup>,  
 Stefanie Tignor<sup>\*</sup>, Xia Zhou<sup>†</sup>, Dror Ben-Zeev<sup>†</sup>, and Andrew T. Campbell<sup>†</sup>  
 Dartmouth College<sup>†</sup>, The University of Texas at Austin<sup>‡</sup>, Northeastern University<sup>\*</sup>  
 {ruiwang, chentc, zhenyu, ltx, xia, campbell}@cs.dartmouth.edu,  
 gabriella.harari@utexas.edu, tignor.s@husky.neu.edu, dror.ben-zeev@dartmouth.edu

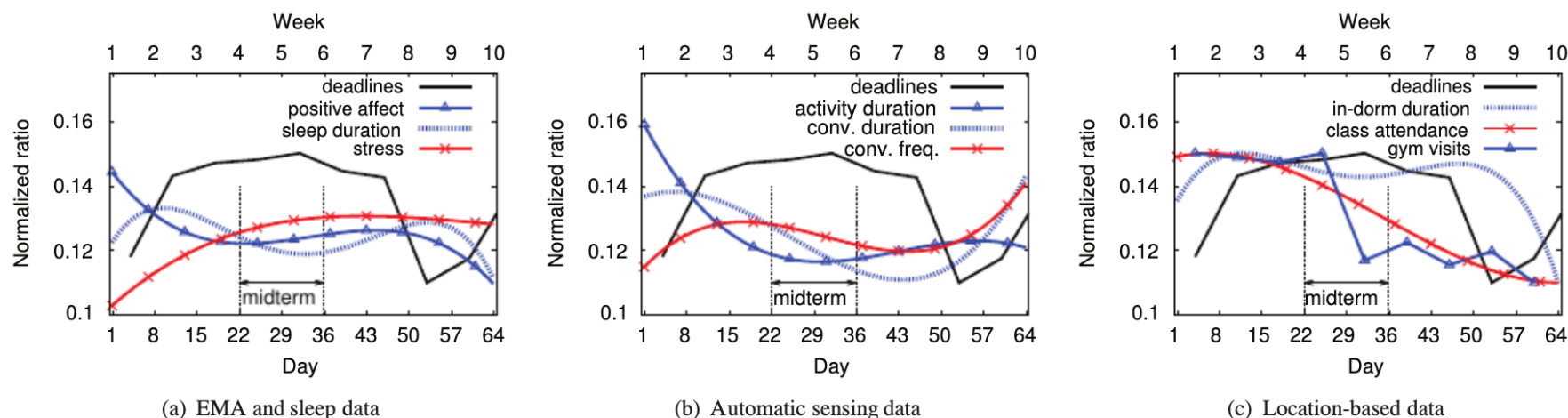


Figure 5. Dartmouth term lifecycle: collective behavioral trends for all students over the term.

Technology

# Parkland school turns to experimental surveillance software that can flag students as threats



# Thought Point...

Contrasting the three types of school/college student behavioral monitoring: 1) Attendance surveillance; 2) Mental health surveillance; 3) Violence surveillance

- Is one less or more (un)ethical than the other? Which one and why?
- Could we use an ethical theory to analyze it?