

# MIS 0855 Fall 2016 – Data Science *Week 2 – In Data We (Mis)Trust*

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## Do you trust your data?

- You have a decision to make.
- You have theory in mind and hypotheses to test.
- You have data at your hand!
- Do you believe in your data?



[http://www.forbes.com/2010/07/21/trust-privacy-technology-wall-street-opinions-laneri-noer-trust\\_land.html](http://www.forbes.com/2010/07/21/trust-privacy-technology-wall-street-opinions-laneri-noer-trust_land.html)

# Can we trust the FBI's national crime stats?

*Uniform Crime Reports*

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U.S. DEPARTMENT OF JUSTICE • FEDERAL BUREAU OF INVESTIGATION • CRIMINAL JUSTICE INFORMATION SERVICES DIVISION

# CRIME in the United States 2013

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About Crime in the U.S. (CIUS) By offense, by region, by state, by local agency

Offenses Known to Law Enforcement	Persons Arrested	Police Employee Data
<ul style="list-style-type: none"> <li>Violent Crime</li> <li>Property Crime</li> <li>Clearances</li> </ul> <p>(offenses "closed" by arrest or exceptional means.)</p> <ul style="list-style-type: none"> <li>Go to Offense Tables</li> </ul>	<p>Expanded Offense Data</p> <ul style="list-style-type: none"> <li>Homicides</li> <li>Trends</li> <li>Rates</li> <li>Weapons</li> </ul> <p>Includes data about the age, gender, and race of arrestees for 28 separate offenses including murder</p> <ul style="list-style-type: none"> <li>Go to Arrest Tables</li> </ul>	<p>Includes data about sworn officers and civilian employees</p> <ul style="list-style-type: none"> <li>Go to Police Employee Tables</li> </ul>

**About the Uniform Crime Reporting (UCR) Program**  
A history of the UCR Program and an overview of what UCR can provide  
[Read more](#)

**A message from the Director of the FBI**  
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<http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013>

## *Uniform Crime Reports*

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### **UCR General FAQs**

[View printable version \(pdf\)](#)

## **THE BASICS**

### **What is the UCR Program?**

The UCR Program is a voluntary city, university and college, county, state, tribal, and federal law enforcement program that provides a nationwide view of crime based on the submission of statistics by law enforcement agencies throughout the country.

## **OFFENSE INFORMATION**

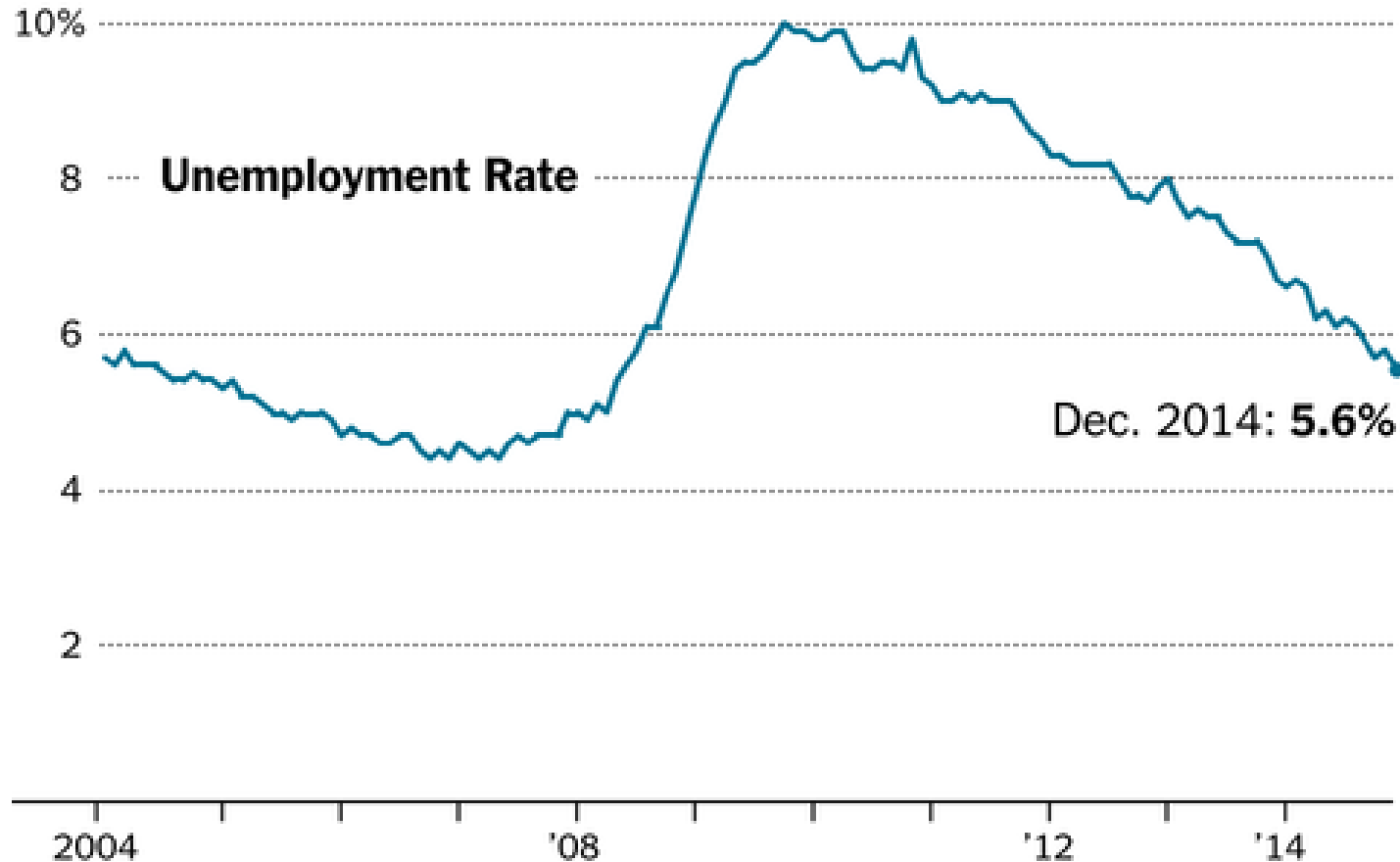
### **Which specific crimes are reported to the UCR Program, and why were these crimes identified for reporting?**

The UCR Program collects offense information for murder and nonnegligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft, and arson. These are Part I offenses and are serious crimes by nature and/or volume. Not all crimes, such as embezzlement, are readily brought to the attention of the police. Also, some serious crimes, such as kidnapping, occur infrequently. Therefore, the UCR Program limits the reporting of offenses known to the eight selected crime classifications because they are the crimes most likely to be reported and most likely to occur with sufficient frequency to provide an adequate basis for comparison.

## Problems with UCR Data

- *The UCR reports only crimes known to the police.*
- *The UCR reports on only the most serious crime incidents.*
- *The UCR does not collect all relevant data.*
  - “Forcible rape of a male victim is recorded as an aggravated assault.”
- *The UCR reveals more about police behavior than it does about criminality.*
  - Reporting by local police to the FBI is on a voluntary basis.

# Unemployment Rates – Can We Trust This?



Source: Bureau of Labor Statistics

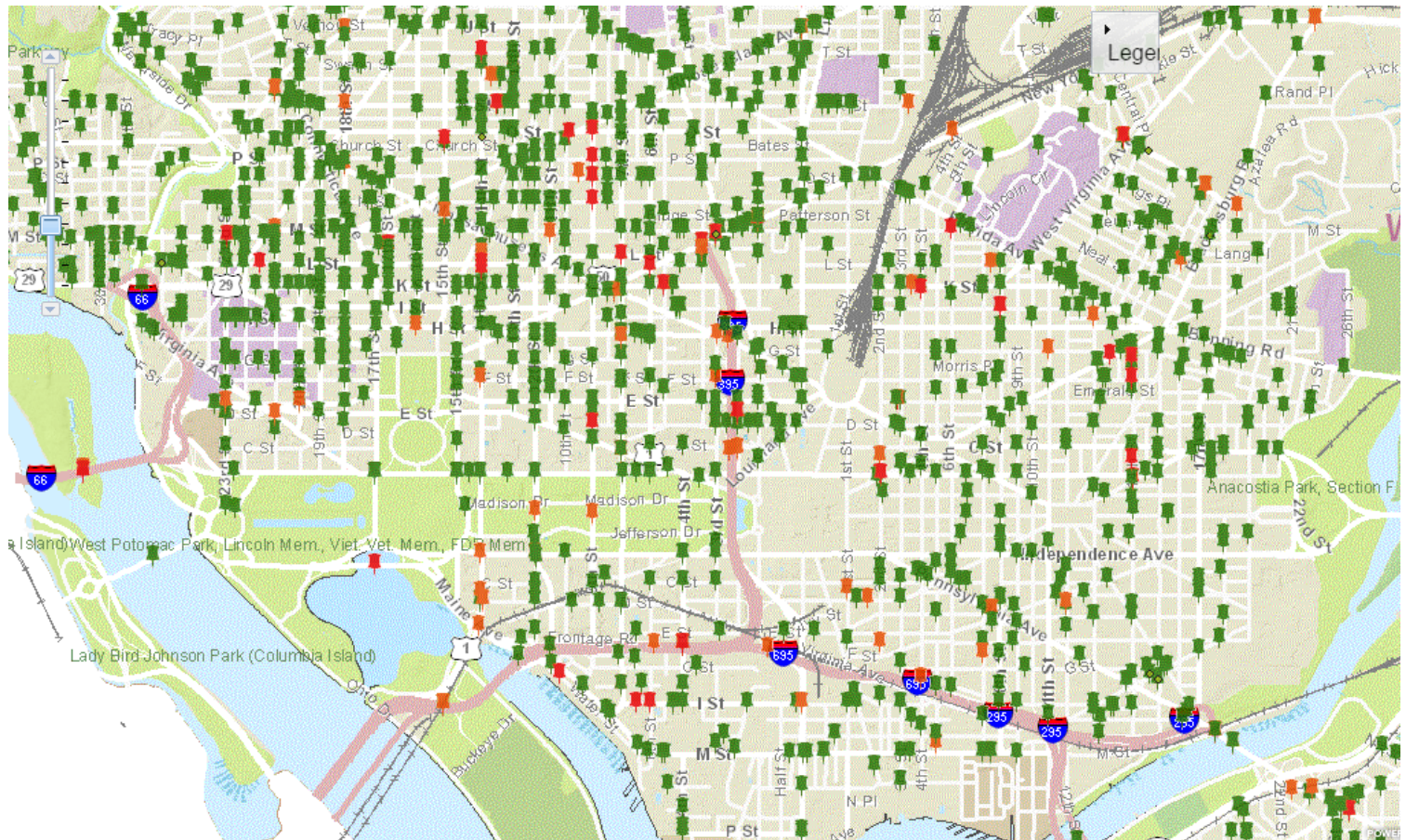
<http://news.blogs.nytimes.com/2015/01/20/obama-2015-state-of-the-union-address-sotu-live/>

## How to Calculate Unemployment Rates

People looking for work  
 ↓  
 # Unemployed  
 Unemployment Rate =  $\frac{\text{# Unemployed}}{\text{# Labor Force}} \times 100$   
 ↑  
 people working + people looking for work

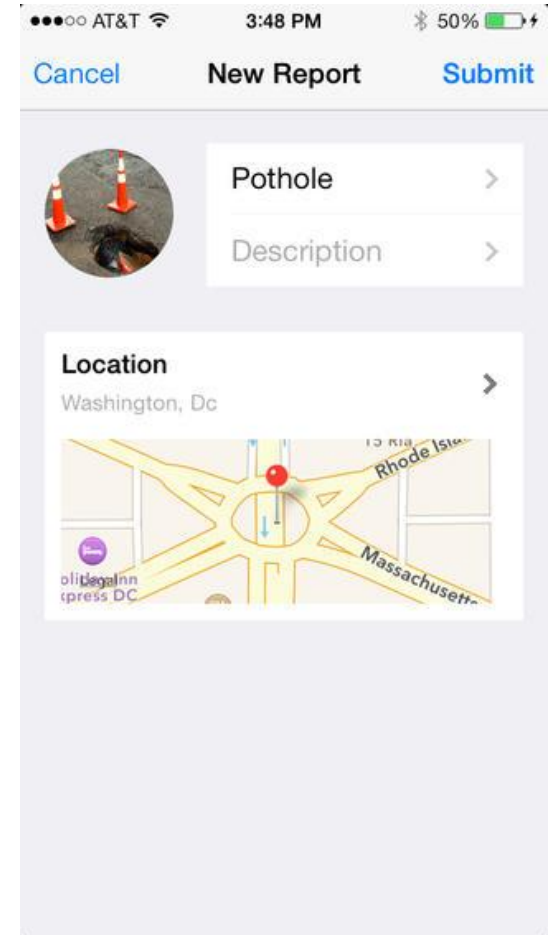
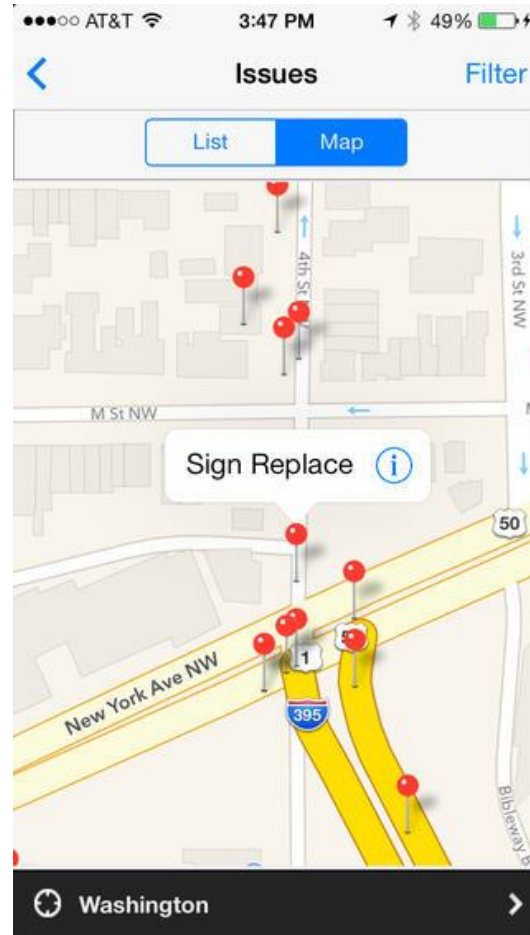
- Unemployment rates can be lower when more people stop looking for work.
- when more people work for part-time jobs.

# Washington D.C. Potholes Map (<http://ddot.dc.gov/service/pothole-repair/>)



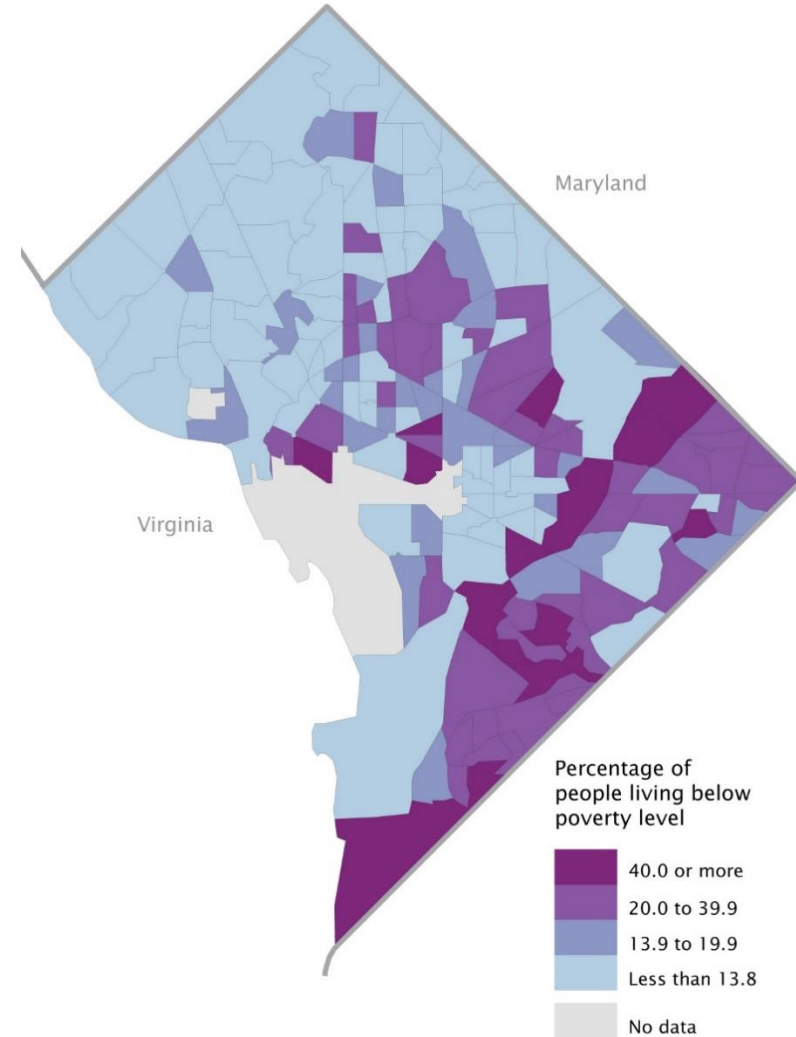
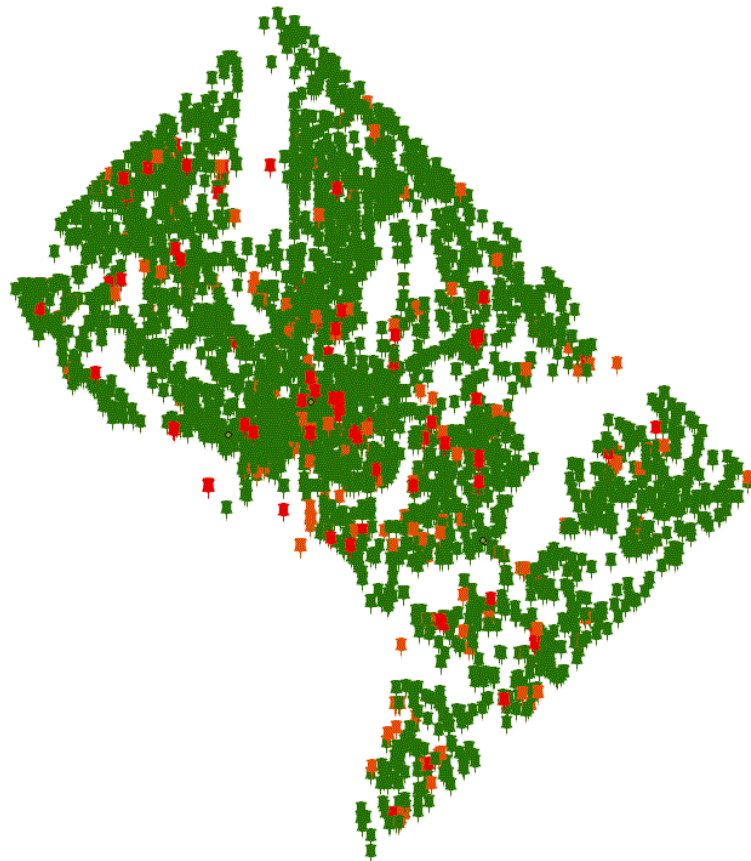


# Reported via DC 311 Mobile App



<https://itunes.apple.com/us/app/washington-dc-311/id498625758?mt=8>

## Percentage of People in Poverty in the Past 12 Months for the District of Columbia by Census Tract: 2006–2010



Source: U.S. Census Bureau, 2006–2010 American Community Survey. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see [www.census.gov/acs/www](http://www.census.gov/acs/www).

<http://gis.ddot.dc.gov/potholeapp/IdentifyPotholes.aspx>  
<http://www.citylab.com/work/2011/12/map-day-uneven-spread-urban-poverty/721/>

# Do we have to believe Yelp stars and reviews?

## Masters Bar & Restaurant

★★★★☆ 26 reviews [Details](#)


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🔖 Bookmark

\$\$ · Bars, American (Traditional) [Edit](#)




📍 1535 N Carlisle St  
Philadelphia, PA 19121  
Avenue of the Arts North


📍 Get Directions

📞 (215) 787-9933


✉ Message the business

🌐 mastersphilly.com







Masters chopped salad  
by Waylon N.




See all 30



“Even when I moved to a new apartment farther away I will still take the extra walk to go there instead of the other bars near **temple**.” in 5 reviews



“EDIT: **Whalen** just made me a cocktail based on the following directions “I like tequila, I don’t like sweet, and I love spicy” and then he made me a cocktail sent from the tequila gods. :)” in 2 reviews



“Plenty of **TVs** on the wall and the staff are cool about switching it to whatever sporting event you may be interested in.” in 3 reviews  
Has TV: Yes

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<https://www.yelp.com/biz/masters-bar-and-restaurant-philadelphia>