## MIS 0855 Spring 2015 Data Science

## Day 29 - Integrating Data

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## Where to Find Data

- If you're buying a house, what data do you need to make a decision?
- How many different data sources would you need?

http://www.moneyunder30.com/how-to-find-a-good-realtor



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## Price History

| DATE | EVENT | PRICE | \$/SQFT | SOURCE |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| $12 / 20 / 14$ | Listed for sale | $\$ 2,200,000+746 \%$ | $\$ 995$ | Berkshire <br> Hath... | $\boldsymbol{N}$ |
| $01 / 28 / 93$ | Sold | $\$ 260,000$ | $\$ 117$ | Public Record | $\boldsymbol{N}$ |

## Tax History

Find assessor information on the county website

| YEAR | PROPERTY TAXES | CHANGE | TAX ASSESSMENT | CHANGE |
| :--- | :--- | :--- | :--- | :--- |
| 2014 | $\$ 13,837$ | $+130 \%$ | $\$ 1,032,600$ | $+1,580 \%$ |
| 2013 | $\$ 6,006$ | $+3.6 \%$ | $\$ 61,472$ | -- |
| 2012 | $\$ 5,798$ | $+3.9 \%$ | $\$ 61,472$ | -- |
| More $\checkmark$ |  |  |  |  |

http://www.zillow.com/homedetails/237-S-18th-St-APT-8A-Philadelphia-PA-19103/10602849_zpid/
Nearby Schools in Philadelphia SCHOOL RATING
GRADES DISTANCE

Greenfield Albert M School (assigned)
South Philadelphia High (assigned)
PK, 8-12
1.6 mi

## NYPD Crime Center

- According to the video, how many different databases is NYPD operating?
- To build "Real-Time Crime Center," they should do what?
- They need to integrate data from multiple sources.

http://www.nycpolicefoundation.org/programs/real-time-crime-center/


## Data I ntegration



## Data Warehouse

## Data Warehouse Model



## ETL - A Key Step in Building Data Warehouse

- Extracts data from internal and external databases
- Transforms the data so that it has common definitions and formats, and
- Loads the transformed data into a data warehouse

