

# intro

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## intros (others overlap? collaborate!)

- about myself `http://theaok.github.io`
- what do you research?
- using any data or want to find any data?

# outline

why?

what is GIS?

general overview; approach and policies

# outline

why?

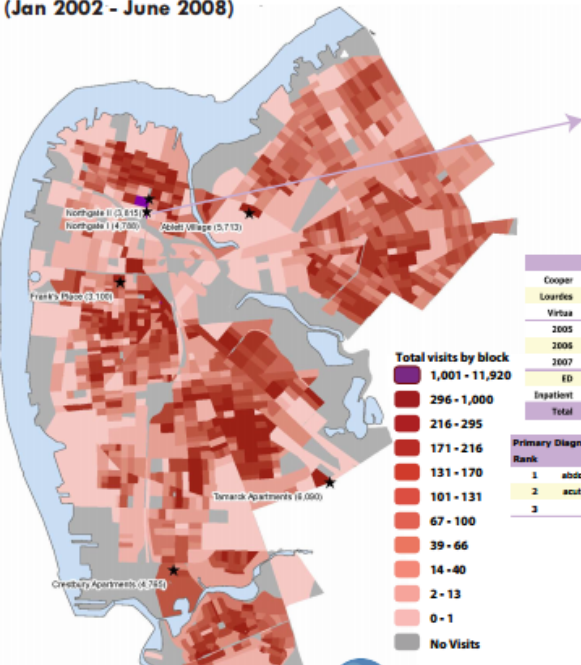
what is GIS?

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## a general thought about maps

- maps are always useful
- no matter what you study it always takes place somewhere and place matters
- so you should use maps for whatever you study in *\*all\** other classes
- and all other projects outside of school
- it will always help with understanding of what is going on

# Inpatient and Emergency Room Visits in Camden, NJ (Jan 2002 - June 2008)



Northgate I Public Housing



|           | Visits | Patients | Charges      | Receipts    | Collected |
|-----------|--------|----------|--------------|-------------|-----------|
| Cooper    | 3,172  | 749      | \$42,144,897 | \$4,994,658 | 12%       |
| Louder    | 811    | 337      | \$7,848,809  | \$1,038,611 | 13%       |
| Virba     | 805    | 331      | \$1,742,467  | \$345,092   | 20%       |
| 2005      | 838    | 370      | \$10,834,420 | \$1,268,373 | 12%       |
| 2006      | 738    | 355      | \$6,867,995  | \$883,549   | 13%       |
| 2007      | 790    | 369      | \$7,979,262  | \$901,181   | 11%       |
| ED        | 3882   | 978      | \$6,150,592  | \$864,019   | 14%       |
| Inpatient | 906    | 408      | \$45,584,781 | \$5,504,342 | 12%       |
| Total     | 4,788  | 1,070    | \$31,735,374 | \$6,368,361 | 12%       |

## Primary Diagnosis

| Rank | ED                     | Inpatient                            |
|------|------------------------|--------------------------------------|
| 1    | abdominal pain (789.0) | live birth (V3X.0)                   |
| 2    | acute URI NOS (465.9)  | chest pain (786.5)                   |
| 3    | chest pain (786.5)     | congestive heart failure NOS (428.0) |



## why GIS?

- govt (local, intl, etc)
  - zoning, public works (streets, water, sewer, garbage, land ownership/valuation, public safety (fire and police))
  - natural resources (oil, gas, coal, etc)
- uni: “no matter what you study, it takes place somewhere”
- businesses
  - retail site selection & customer analysis
  - logistics: vehicle tracking & routing
  - natural resource exploration (petroleum, etc.)
  - civil engineering/construction
- so you see that you can do a lot with GIS

why? ● yes. it gives you specific, marketable job skills

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## what is there?

- GIS Geographic Information Systems
  - Geographic: Cities, Roads, Rivers, Countries, etc
  - Information Systems: data, software, programming,
  - like MIS (Management Information Systems) or IT
- GIS=CS(graphics, database/sys adm, coding)+geography
- really, much of the GIS is data management
- geographic=geospatial=spatial (synonymous)

## past and future

- much of the gis has been (still is) done with ArcGIS/ArcMap
  - this is more of a dinosaur, however
- the future is open source software like QGIS

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## approach

- you are encouraged to collaborate  
(prep for class, ps, paper)
- software class! applied, data-driven
- free to choose data/topics as long as relevant to the class
  - bring your own data; kill 2 birds with one stone
  - you need data (with geo: address, city, county, etc)
  - don't worry, as long as you have any research interest, you are likely to find data about it
  - we'll go over data sources in few classes

## ps tips

- **important**: people never follow it
- start early
- late ps \*not\* accepted
- ask questions early!
- do not hesitate to ask questions
- there are no “silly” questions
- it is normal to get stuck and ask questions when learning new software
- in class: ask questions / tell me to go slower if needed  
(i have an impression that i go too fast sometimes)

## ext cre opport $\leq 5\%$ of final grade; harsh grading!

- present sth not covered (has to be GIS, of course)
- present alternative way of doing sth that we have covered
- civic engagement: check out these
- <https://cpachvi.org/about/homeless-services/>:  
SJ: homeless, poverty
- <http://www.laeda.com>: camden small businesses
- <http://virtua.org>: SJ: health

## what data?

- passionate about
- quality/quanity easily available
- career advancement in future [can also just start with data from current workplace]