intro

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this version: Friday 8th September, 2023   10:14

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
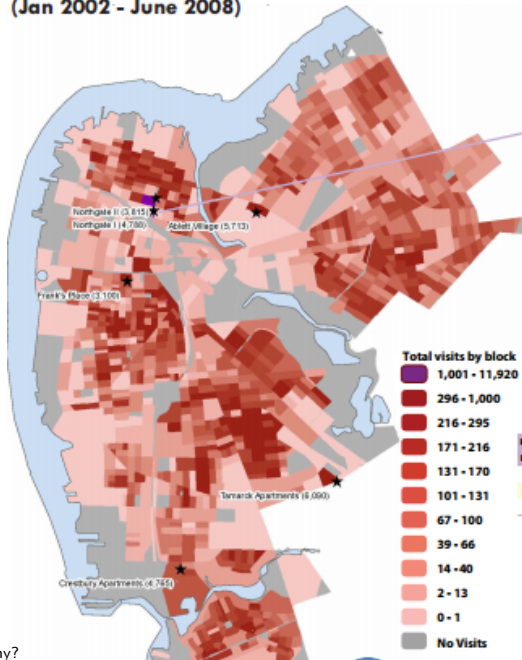
outline

why?

what is GIS?

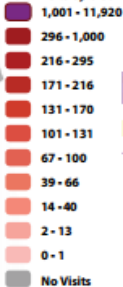general overview; approach and policies

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

Map locations labeled:
Northgate II (3,615)
Northgate I (4,780)
Ablett Village (5,713)
Frank's Place (3,100)
Tarrarck Apartments (6,090)
Crestbury Apartments (4,745)

Total visits by block

- 1,001 - 11,920
- 296 - 1,000
- 216 - 295
- 171 - 216
- 131 - 170
- 101 - 131
- 67 - 100
- 39 - 66
- 14 - 40
- 2 - 13
- 0 - 1
- No Visits

	Visits	Patients	Charges	Receipts	Collected
Cooper	3,172	749	$42,144,097	$4,994,658	12%
Lourdes	811	337	$7,848,809	$1,028,611	13%
Virtua	805	331	$1,742,487	$345,092	20%
2005	838	370	$10,834,420	$1,269,373	12%
2006	738	355	$6,967,995	$881,549	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	$51,735,374	$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)

what you know. Know what to change.

why?

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
- 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 ≤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]