intro

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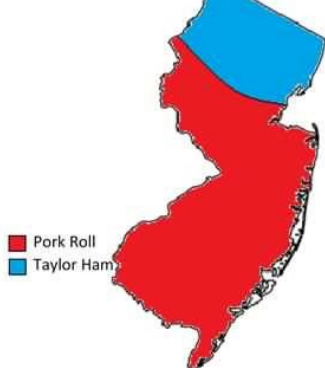
this version: Tuesday 1st September, 2020   19:00

outline

general overview; approach and policies

why?

what is GIS?

Thinks they are New York
Thinks they are Philly
Pineys
The Shore
Farmlands
Basically Alabama
Hill People
Diversity
Armpit of NJ
Knock-off Vegas

Pork Roll
Taylor Ham

North Jersey
South Jersey
Claims Central
Jersey Exists

Driving
Uses their turn signal
Uses their middle finger

outline

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why?

what is GIS?

introductions (see if others overlap: can collaborate!)

- about myself http://theaok.github.io

-

- what do you research?
- using any data or want to find any data?
- what do you expect from this class?

2 keys to success

- start early on ps
- ask questions

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 to have some data for this class

○ don't worry, as long as you have any interest, you are likely to find data about it

○ we'll go over data sources in few classes

before and after the midterm

- 1st half basics, go fast
- 2nd half more extras, relax with pace of material but work on paper (final ps/presentation)
- before: basics, data, theory, general
- after: more specific and advanced topics; research oriented

communication

- email is a preferred mode of communication; just email
  gis_int@googlegroups.com

  ○ and everybody in the class

  ○ including me and GA will get it

  ○ messages will be marked with "[gis_int]" in the subject

- you can easily filter them to a specific folder, e.g. in
  gmail: http://support.google.com/mail/bin/answer.py?hl=en&answer=6579

- during the class interrupt me as often as necessary

- after the class email me if you have questions – i check
  email frequently

- everyone got welcome email? no? email me

- stop by my office!

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)

class website=syllabus

- slides are linked from the syllabus
- i try to post about a week ahead, but tentative only
- print, if you like, right before the class–i am updating continuously
- let's see ps directions

outline

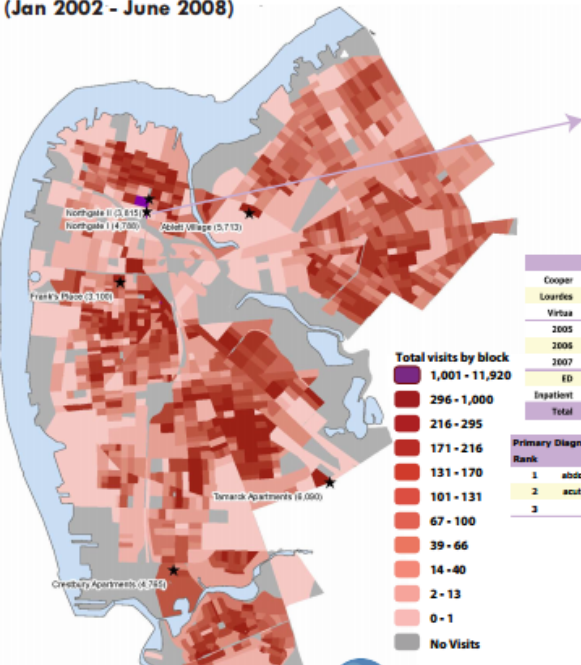general overview; approach and policies

why?

what is GIS?

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
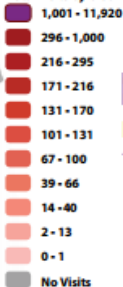- it will always help with understanding of what is going on

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

Northgate I Public Housing

Northgate II (3,815)
Northgate I (4,780)
Ablett Village (5,713)
Frank's Place (3,100)
Tarrack Apartments (6,000)
Crestbury Apartments (4,745)

	Visits	Patients	Charges	Receipts	Collected
Cooper	3,172	749	$42,144,897	$4,994,658	12%
Lourdes	811	337	$7,848,809	$1,028,611	13%
Virtua	805	331	$1,742,467	$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**	**$6,368,381**	**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)

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

Know what you know, Know what to change.

why?

14 of 25

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what is GIS?

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
- and internet companies like Google

what we'll be doing

- obtain (download, but also eg smartphone/gps), manage and display data
  - a display is usually a map
  - really, this class is mostly about producing maps
- there is much more to the GIS, of course
- this class is just applied mapping

maps

○ keep in mind that a map is visual representation of data

• there is always a database behind a map

○ (database is like spreadsheet, but bigger and fancier)

• or more precisely:

○ there is sometimes a map on the top of the database

○ so maps is just data in the picture

• the bottom line is data !

why GIS in social science?

- local government

  ○ zoning, public works (streets, water supply, sewers), garbage collection, land ownership and valuation, public safety (fire and police)

- federal/state

  ○ natural resource management

  ○ highways and transportation

- any academics: "no matter what you study it takes place somewhere" (place always matter)

  ○ perhaps esp public health/epidemiology and criminology

why GIS?

- 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

ext cre opport ≤10% 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, and email listserv by ext week which one you'd like to do
- https://cpachvi.org/about/homeless-services/: SJ: homeless, poverty
- http://www.laeda.com: camden small businesses
- https://rand.camden.rutgers: SJ: health, etc
- virtua.org: SJ: health

maps are fun! (at the end if time!

- let's look at some interesting maps
  ○ see patterns that cannot see otherwise
  ○ absorb easily lots of information
  ○ compare easily
- `https:`
  `//digg.com/2020/which-state-hates-which-state-map`

the big sort

- "The big sort
  why clustering of like-minded America is tearing us
  apart"
- America polarizes by county
  (counties are becoming either R or D)
- http://www.thebigsort.com/maps.php

who is your city

- http://www.creativeclass.com/_v3/whos_your_city/maps