

# intro

adam okulicz-kozaryn

`adam.okulicz.kozaryn@gmail.com`

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## intros (others overlap? collaborate!)

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

# outline

why?

what is GIS?

general overview; approach and policies

# outline

why?

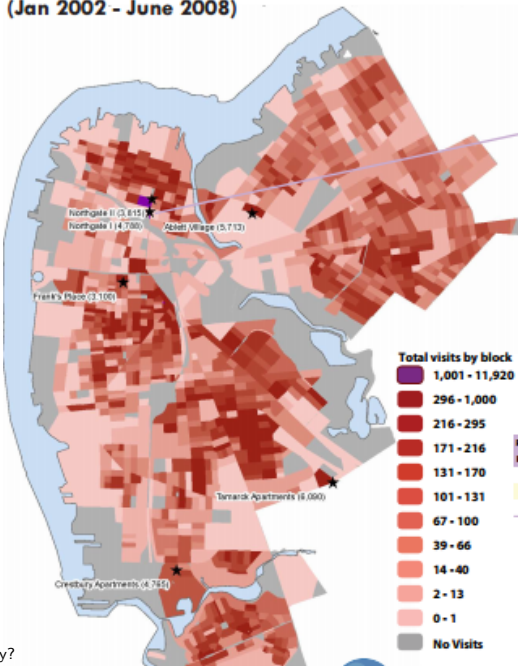
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## a general thought about maps

- maps are (almost) always useful
- no matter what you study, it takes place somewhere and place matters
- so use maps for whatever you study in other classes
- and all other projects outside of school
- it will help with understanding of what's going on

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

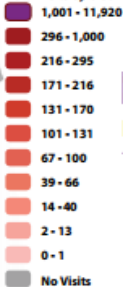


Northgate I Public Housing



	Visits	Patients	Charges	Receipts	Collected
Cooper	3,172	749	\$42,144,897	\$4,994,658	12%
Louder	811	337	\$7,848,809	\$1,008,611	13%
Virbaa	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	\$903,181	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%

## Total visits by block



## Primary Diagnosis

Rank	ED	Inpatient
1	abdominal pain (789.0)	live birth (V1X.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”
- business
  - retail site selection & customer analysis
  - logistics: vehicle tracking & routing
  - natural resource exploration (petroleum, etc.)
  - civil engineering/construction
- you can do a lot with GIS!
- 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

## 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 opensource like Python

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# approach

- 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)
  - have research interest? you'll find data about it!
  - we'll go over data sources in data.pdf

## what data?

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