



# *GIS Institute*

## *Center for Geographic Analysis*





# Welcome

- Intensive training in the application of GIS to research
- Collection, management, analysis, and communication of spatial data
- Topics include: data collection, management and manipulation, spatial and non-spatial analysis, and communication (graphic and cartographic)
- We are following a long tradition of GIS training and research at Harvard



Center for  
Geographic Analysis  
Harvard University



# Institute and CGA Team

- Jason Ur, Director
- Wendy Guan
- Sumeeta Srinivasan
- Jeff Blossom
- Ben Lewis
- Peter Bol, Founding Director
- Lex Berman
- Giovanni Zambotti
- Matt Bertrand
- Stacy Bogan
- Fei Meng



# The Institute Team

- Week 1 will include end-of-day forums
- Today: Everyone
- Tuesday – Friday: 7 to 9 each day in thematic groups
- Participant introductions, research interests, AND project topic
- Opportunity to learn more about each other's project and continue to develop project parameters





# Locations

- CGA, Science Center



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# Learning Outcomes

- Integration of spatial analysis into research
  - Requirements
  - Limitations
  - Thinking Spatially/Geographically
- Use a research tool, vocabulary, and approach to thinking about problems
- Ask spatial and geographic questions





# Goals

- Primary
  - Your projects
- Secondary
  - Asking spatial questions
  - Performing spatial analysis
  - Managing, displaying, and querying spatial data





# Spatial Relevance vs. Spatial Analysis

- Some spatial questions don't require spatial analysis
  - Do some states have higher infant mortality than others? If so, which?
- Others do
  - Are states with higher infant mortality clustered together? Are infant mortality rates within states associated with other geographic phenomena?







# Geographic Terminology

- Definitions are critical
- What does it mean for something to be:
  - Clustered, close, near, far, proximal, within, peripheral, central, distributed, regular, associated with something else, etc?
- Our view of the world also matters
  - Often in GIS we are limited by our data
  - The search for good data can take as much effort as the analysis we perform





# Projects

- Contribute to the success of your research
- GIS exists to supplement your research: letting it play a role in conducting your research should be done carefully
- Spatial analysis vs. analysis of place
  - Units of Analysis and Area of Study





# Project Presentations

- While we have high expectations for your presentations we don't have the same expectations for each of you
- Grouped by theme
  - Topic
  - Technique
  - Place
  - Other
- Lunch, Social





# Agenda

- Skills and Knowledge based
- Workshops and Exercises will focus on developing GIS and related software skills
- Lectures and Seminars will focus on providing background, context, and critical thinking opportunities





# Agenda

- Week 1 focus is skill development related to creating, acquiring, managing, analyzing, and communicating spatial information
- Week 2 focus is critical thinking related to you personal research project
- Overall focus is generating a foundation in the practice and theory of spatial information

