## EGeodalic

2nd Philippine Data Festival
Visualizing and Analyzing Statistical Data with GIS

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## In this session...

- Incorporate and leverage statistical data's spatial property in doing statistical inquiry using a technology called Geographic Information Systems (GIS)
- Data Visualization in ArcGIS
- Spatial Analysis in ArcGIS
- R-ArcGIS Integration


## Geography and Statistical Data are Foundational

An Integrated Data Model is Essential


## Integrating Geography and Statistics

To Understand Poverty


Demo 1:
Data Visualization in ArcGIS

## GIS, Spatial Analysis, and Statistics

Proximity


What is nearby?

Overlay


What is inside of or on top of what?

Statistical


What do geographic
patterns tell us?

Temporal


What changes have occurred over time?

## GIS, Spatial Analysis, and Statistics



Spatial statistics are a set of exploratory techniques for describing and modeling spatial distributions, patterns, processes, and relationships.

## Demo 2:

Spatial Analysis in ArcGIS

## Integrating R with ArcGIS



Store your data in ArcGIS, access it quickly in R, return R objects back to ArcGIS native data types (e.g., geodatabase feature classes).

## Demo 3:

Solving statistical problem in ArcGIS and $R$

In Summary...


Using the Science of Where to understand our world - mapping where things are, how they relate, what it all means, and what actions to take.

## Thank you for attending!



