

# Long Title

Subtitle Space

Long Name

Date of Presentation

Population, Health & Place  
Spatial Sciences Institute  
University of Southern California



## A Bullet List:

- ▶ Item One
- ▶ Cites [1]
- ▶ More Cites [2, 3]

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Bullets next to figure:

- ▶ Method 1
- ▶ *Special Method*
- ▶ **Important Method**

Maybe add a Formula?

$$y_i = \sum_{k=0}^K x_{ik} \circ \beta_i k + \varepsilon$$

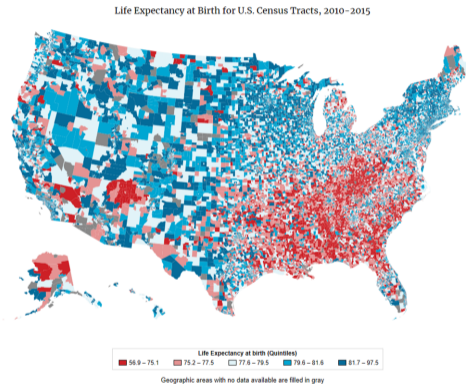


Figure: Motivating Figure



## Side-by-Side Images



**Figure:** Cats have no need for research



**Figure:** Sad Keanu doesnt like your results.

## **Avoid having too much text on your slides**

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1. Folch, D. C., Arribas-Bel, D., *et al.* Spatial Variation in the Quality of American Community Survey Estimates. *en. Demography* **53**, 1535–1554. doi:10.1007/s13524-016-0499-1 (2016).
2. Singh, G. K. Area Deprivation and Widening Inequalities in US Mortality, 1969–1998. *American Journal of Public Health* **93**, 1137–1143. doi:10.2105/AJPH.93.7.1137 (2003).
3. Spielman, S. E., Tuccillo, J., *et al.* Evaluating social vulnerability indicators: criteria and their application to the Social Vulnerability Index. *Natural Hazards* **100**, 417–436 (2020).



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## Algorithm 1 Metropolis Hastings for Spatial Autocorrelation

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Compute Contiguity Matrix & Weights for all geographies,  $j$ , in  $Y$

Initialize Moran Coefficient,  $M_c^0$

▷ Using point-estimate

**for**  $i = 0, 1, 2, \dots$  **do**

    Sample an estimate from each geography within its MOE

▷  $Y_j \sim N(\mu_j, \frac{E_j - \mu_j}{z^*})$

    Compute  $M_c^{cand}$

$$\alpha(M_c^{cand} | M_c^{i-1}) = \min \left\{ 1, \frac{f(M_c^{cand}) \cdot q(M_c^{i-1} | M_c^{cand})}{f(M_c^{i-1}) \cdot q(M_c^{cand} | M_c^{i-1})} \right\}$$

$u \sim \text{Uniform}(0, 1)$

**if**  $u < \alpha$  **then**

$M_c^i \leftarrow M_c^{cand}$

**else**

        Reject  $M_c^i \leftarrow M_c^{i-1}$

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