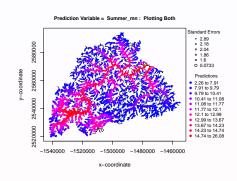
An Introduction to Statistical Models for Spatial Data in Ecology

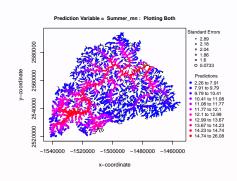
Jay Ver Hoef

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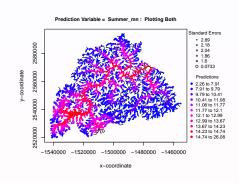


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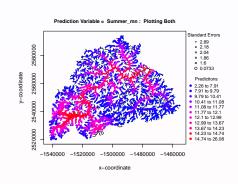




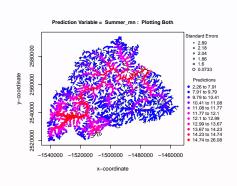
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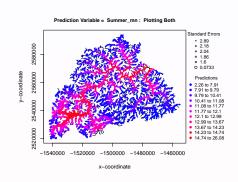
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What are Statistics?

$$\bar{z} = \frac{1}{n} \sum_{i=1}^{n} z_i$$



A statistic is a function of data



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Statistical Models and Inference Model Data Reality 66.8, 68.7, 64.6, μ, σ^2 Modelina Modeling 68.7, 63.2, 57.8, 62.3, 60.1, 65.5, 60.1, 72.2, 69.9 Probability Density Inference **Statistics** 55 60 65 70 75 Moose Calf Weight $s^2 = \frac{1}{11} \sum_{i=1}^{12} (z_i - \overline{z})^2$ $\hat{\mu}, \hat{\sigma}^2$ Inference Inference