

AN R SHINY APPLICATION TO ENSURE DATA INTEGRITY OF THE NATIONAL RESOURCES INVENTORY



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Research Scientist

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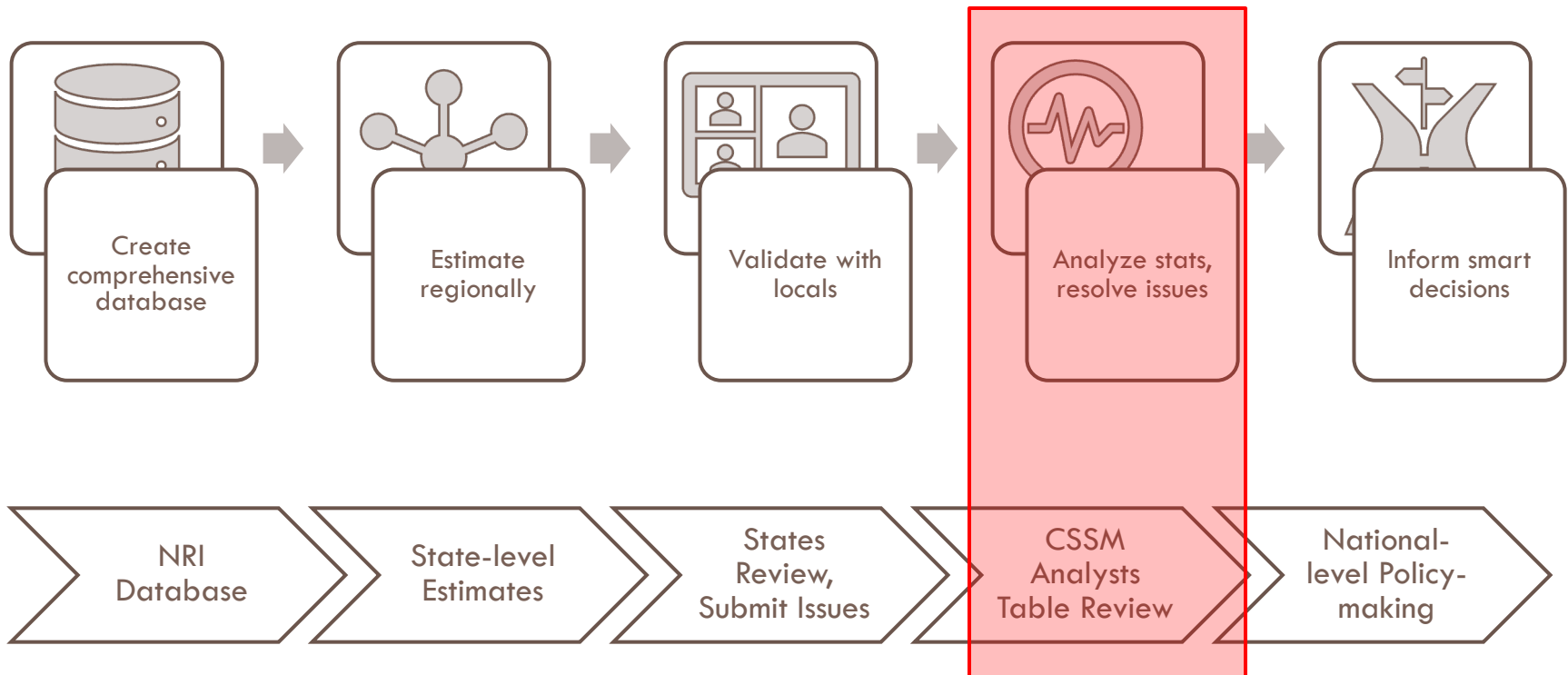


Annie Lyu
Sr. Data Scientist

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Situation: Data Integrity of NRI

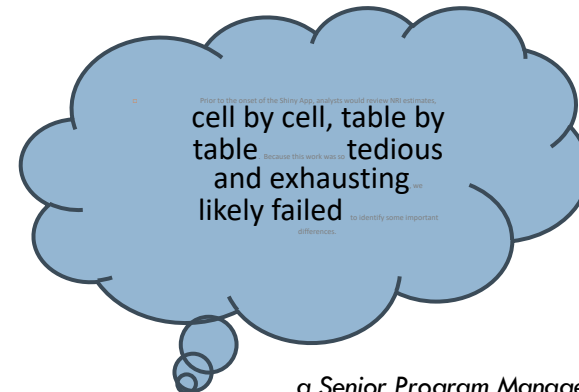


Task: Optimize NRI Table Review

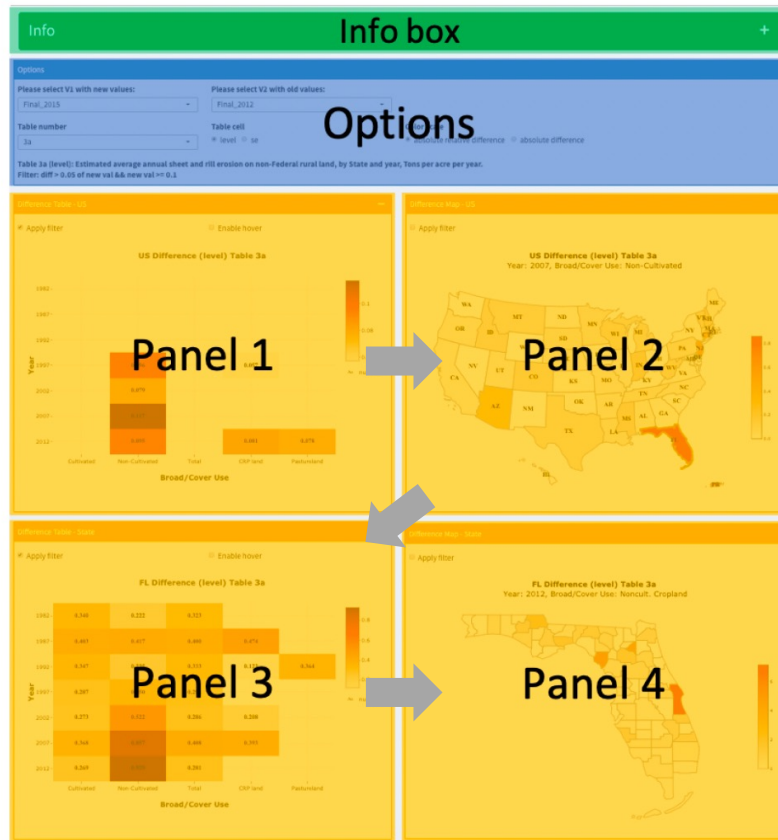
Regions x Variables x Statistics x Iterations

51	84	2	23
National level; 48 coterminous states & Hawaii & Puerto Rico	Total area by land use by year; Average soil erosion by land user by year; Conservation practices by land use by year; ...	Estimate; Standard Error	Every new 2015 NRI version to 2012 NRI version; Every new 2015 NRI version to previous 2015 NRI version

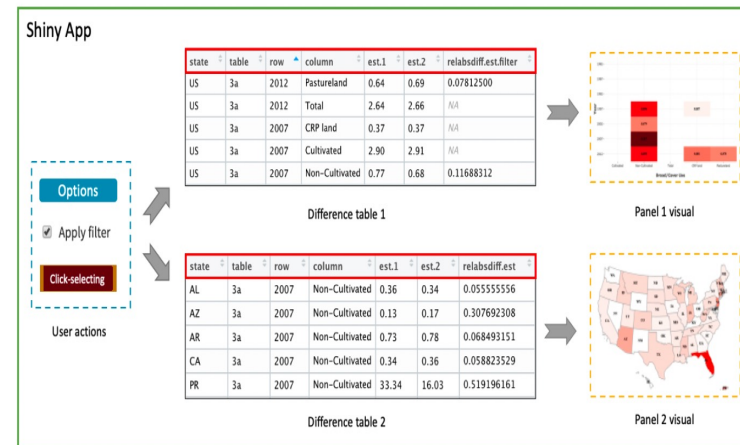
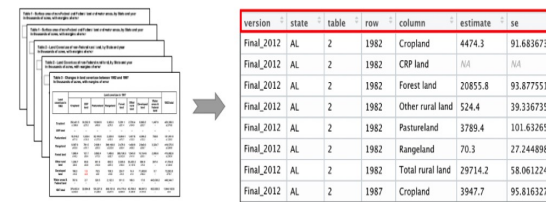
»»» **197,000**
Difference Tables



Action: Shiny Tool Design & Dev



User Interface & Visual Design



Data Model Design

Result: User Testimonial

Katy
Data Analyst Team Lead



The visual display of the difference data is **easy to interpret and understand, saving us time** when deciding what needs attention first. The heat map capability allows us to easily zero in on **priority areas for investigation**. It improves our efficiency.

Wayne
Distinguished Research Professor



The Shiny tool made it **order of magnitude easier** to review tables, compared to previous practice.

Steve
Senior Program Manager



There is no doubt that the Shiny App has **drastically increased the accuracy and efficiency** of detecting differences in NRI estimates between estimation runs.