

# How Much Energy Could I Save in my Home?

# Goal and Background

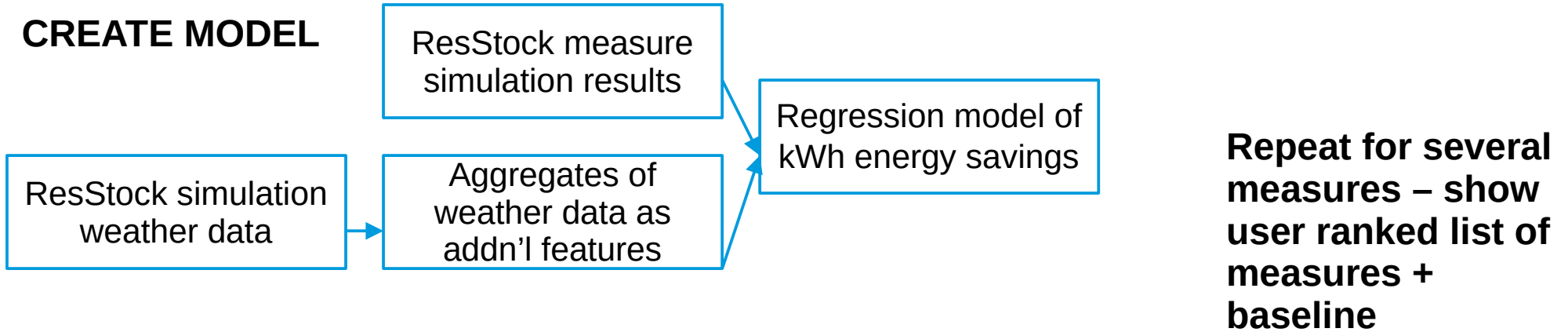
- Create a website for homeowners to use to estimate how much energy and emissions they might save from doing potential projects, and how these savings will evolve with climate change
- Core of project uses ResStock data set from NREL
  - This dataset models the residential building stock in US with dependent probabilistic distributions of 100s of features about the buildings.
  - Then samples from these distributions to create fictional buildings that are very similar to real ones
  - Runs the buildings through physics simulations of “what-if” scenarios for various energy measures, and reports on energy and emissions savings

# Project Intent

- Create website that allows user to enter info they know about their home one-by-one, starting with county
- Train regression models on this data (one for each potential measure) that predicts energy use based on all info entered and show ranked list of top projects for those features
  - Include some weather data aggregates as features
- At runtime, use model to predict energy savings by project for input decade (for weather)
- Also create model for baseline energy use so user can see their projected energy use/bill in a given decade

# Measure Flowchart

## CREATE MODEL



## USE MODEL

