

Pre-defined list of random numbers. These are the **model input parameters**. The parameters cannot be observed directly, but we can use Bayesian inference to estimate them

0.3565
0.1954
0.8235
0.8400
0.0187
0.9701
0.0356

Model
Input

Pedestrian
Model

Model
Output

Truth Data
(number of agents
in the system per
iteration)

Add some
noise

Noisy truth data

Priors

?
?
?
?
?
?
?

We want to estimate the value of each of these random numbers. They are our **(uninformed) priors**.

Observe Truth
Data

We can **observe** the truth data, using probabilistic inference to estimate the true shape of the posterior distribution

Posterior

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-
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After **observing** some 'real world' data, we now have a posterior distribution of our model parameters.

Use **MCMC Sampling** to explore this multi-dimensional space, searching for the optimal combination of parameter values.