

## Contribution 4

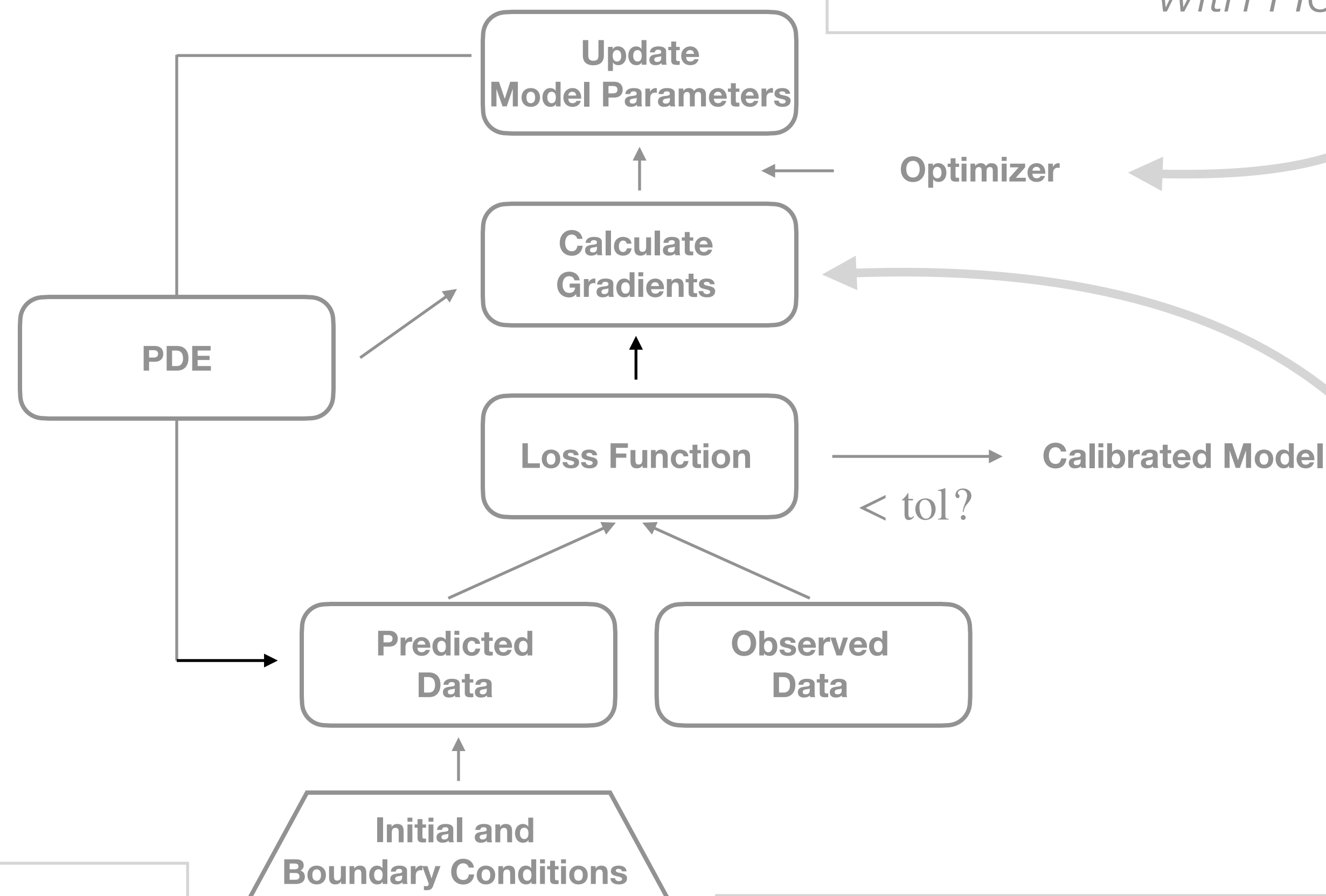
### Stochastic Inverse Problem

*Modeling Random Variables with DNNs*

## Contribution 3

### 2nd Order Physics Constrained Learning

*Accelerating Convergence and Improving Accuracy with Hessian Information*



## Contribution 1

### Software Implementation

*ADCME: Gradient Calculation and Inverse Modeling Pipelining*

## Contribution 2

### 1st Order Physics Constrained Learning

*Calculating Gradients for Implicit & Iterative Operators*