Outline

Introduction

Functional Data Analysis

- Elastic Metric

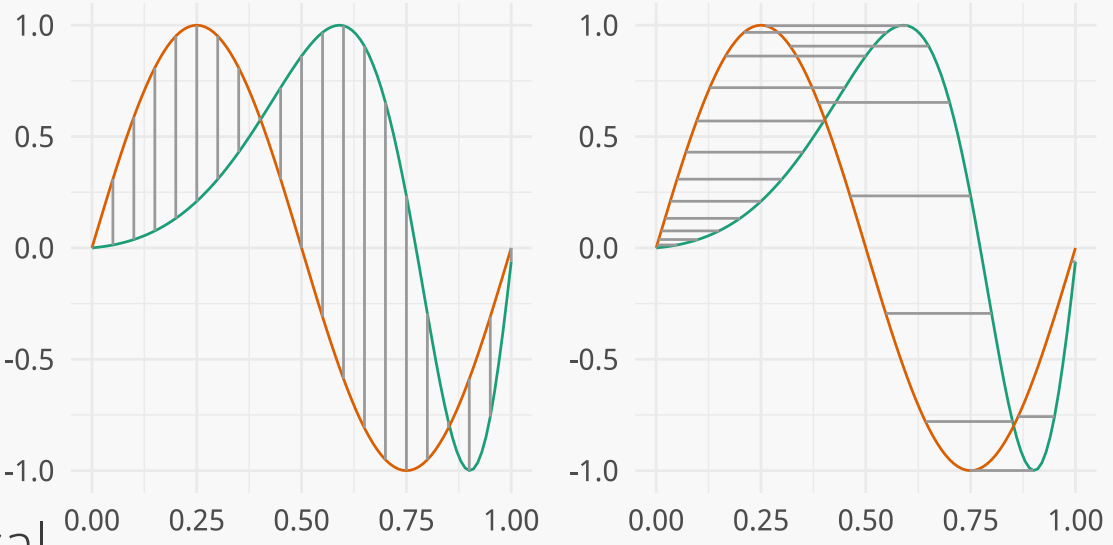
Elastic Bayesian Model Calibration

Results

- Simulation
- Z-machine Equation of State

Introduction

- Question: How can we model functions
  - Can we use the functions to **classify** diseases?
  - Can we use them as **predictors** in a regression model?
  - Can we **calibrate** a computer model?
- It is the same goal (question) of any area of statistical study



- One problem occurs when performing these types of analysis is that functional data can contain variability in time (x-direction) and amplitude (y-direction)
- How do we characterize and utilize this variability in the models that are constructed from functional data?