



Metrics to assess model performance - I



Video: Welcome to Course 2!
44 sec



Reading: What can you expect from this course/specialization?
10 min



Video: Introduction
1 min



Video: Underfitting and Overfitting
2 min



Video: Explained Variance
2 min



Video: Cross Validation
1 min



Video: Information Criteria
1 min



Video: Log-likelihood and Deviance
3 min



Video: Posterior Predictive Distribution
1 min



Reading: Likelihood and its use in Parameter Estimation and Model Comparison
1h

Metrics to assess model performance - II



Environment Setup for Run

There are various ways to setup and run the Python notebooks. Here are instructions on how to setup your environment.

https://sjster.github.io/introduction_to_computational_statistics/

The What, Why and Whom.

The purpose of this series of courses is to teach the basics of performing inference. This is **not** intended to be a comprehensive statistics and probability nor does it cover Frequentist statistics Hypothesis Significance Testing (NHST). What it does cover is

- The basics of Bayesian probability
- Understanding Bayesian inference and how it works
- The bare-minimum set of tools and a body of knowledge for performing inference in Python, i.e. the PyData stack of NumPy, Pandas and Plot.ly.
- A scalable Python-based framework for performing Bayesian inference

With this goal in mind, the content is divided into the following

- Introduction to Bayesian Statistics
- Introduction to Monte Carlo Methods
- PyMC3 for Bayesian Modeling and Inference

Why Inference?

The purpose of the set of courses is to focus on **Inferential Statistics**.

All the samples in the group that we are interested in learning about. Populations can be described by **parameters** such as the mean and variance of the data. Often, we do not have access to all the data in the population. The metrics of mean and variance computed from the samples are called **statistics** of the data.