

A/B Test Methods for BI Analysts and Decision Makers

32 hours

Course Overview:

A/B Test methodology is widely used in commercial Web Pages, Applications, UI Design and scientific experiments. Optimizing the process and answering business-oriented questions can improve the performance of many goal oriented tasks.

This course is about learning the concept of A/B Test, and you will learn:

Will introduce the 2 main approaches for A/B Test.

- The multi variants test (A/B/C).
- The Explore vs. Exploit dilemma and few policies to handle it.
- Real world tricks for efficient and reliable tests.

The course will use Jupyter Notebooks with Python / Julia code within the class in real time. The course will include some exercises to gain the basic skills required in the course.

Who should attend:

- BI Analysis
- Junior Data Scientists.

Required skills:

- Basic Python / Julia.

Course Contents:

- Basic Concepts in Probability / Statistics
 - Random Variable
 - Discrete and Continuous Distributions
 - Frameworks for Random Numbers / Distributions: Numpy and SciPy
- A/B Test
 - Definition
 - Key Performance Indicators: Discrete (Sales / Clicks) vs. Continuous (Revenue, Revenue per View / Click)
- Frequentist A/B Approach
 - The Model
 - The T-Test (Continuous and Discrete)
 - Estimating number of samples
- Bayesian A/B Approach
 - Bayesian vs. Frequentist
 - Priors for Bayesian Model and Conjugate Priors
 - Discrete Bayesian Model
 - Continuous Bayesian Model
 - Stopping Rules, Confidence Intervals
- Real World Practices
 - Learning prior
 - Control group
 - Answering business questions by simulations
 - Online Test
 - Visualizations