

Statistical Methods in MATLAB

OEM: MathWorks • Duration: 2 Days (16 hrs) • Code: MW-STATISTICAL-METHODS-IN-MATLAB

COURSE MODULES & TOPICS

Day 1 of 2

Importing and Organizing Data

- Importing data
- Data types
- Tables of data
- Merging data
- Categorical data
- Missing data

Exploring Data

- Visualizing data
- Calculating parameters of location, spread, and shape
- Computing correlation coefficients
- Perform calculations with grouped data

Distributions

- Probability distributions and their parameters
- Comparing and fitting distributions
- Fitting nonparametric distributions
- Bootstrapping and simulation
- Generating random numbers from arbitrary distributions
- Controlling the random number stream

Day 2 of 2

Hypothesis Tests

- Confirmatory data analysis
- Hypothesis tests for normal distributions
- Hypothesis tests for nonnormal distributions

Analysis of Variance

- Performing Analysis of Variance (ANOVA)
- Computing corrections for multiple comparisons
- Performing N-way ANOVA and Multivariate Analysis of Variance (MANOVA)
- ANOVA for non-normal data
- Independence tests for categorical data

Regression

- Linear regression models
- Fitting linear models to data
- Evaluating the fit and adjusting the model
- Logistic and generalized linear regression
- Nonlinear regression
- Feature selection and transformation