

# Lectures

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Statistical Programming

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## 1. Algebra basics with NumPy/SciPy [session 14]

- Why to learn Algebra
- Scalars, vectors, matrices, tensors
- Operations with vectors
- Operations with matrices
- Practical uses of Algebra

## 2. Intro to pandas [session 15]

- Why to learn Pandas
- Introduction to pandas
- Series and DataFrames
- Slicing, filtering, mapping, grouping
- Practical uses of Pandas

## 3. Dataframe manipulation [session 16]

- Why to learn Dataframe manipulation
- Rearranging and reshaping
- Join, merge, concat
- Wide and long data
- Practical uses of dataframe manipulation

## 4. Intro to Statistics [session 17]

- Why to learn Statistics
- Basic concepts
- Probability
- Distributions

- Practical uses of Statistics

## 5. **Exploratory data analysis (EDA)** [session 18]

- Why to learn EDA
- Variables and Feature engineering
- Dealing with missing data
- Basic data analysis
- Practical uses of EDA

## 6. **Data analysis case** [session 19]

- Getting the data
- Massaging the data
- Analyzing the data
- Providing insights