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# Python in Data Science (Veri Bilimi) Eğitimi

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## Eğitim Hakkında

The training course will help the participants prepare for Web Application Development using Python Programming with Data Analytics. Such data visualization is a great tool for Top Management in decision making.

## Neler Öğreneceksiniz

- Anaconda, conda and Jupyter
- Python Data Science tools: NumPy and Pandas
- Data cleaning and preparation
- Data Analysis
- Data Visualisation
- Machine Learning, Big Data and Predictive Analytics
- Data preprocessing and feature engineering with Python
- Supervised learning algorithms with scikit-learn
- Unsupervised learning algorithms with scikit-learn
- Evaluation, model introspection and error analysis

## Eğitim İçeriği

### Day 1

#### Data Science

**Data Science Team Composition (Data Scientist, Data Engineer, Data Visualizer, Process Owner)**

#### Business Intelligence

- Types of Business Intelligence
- Developing Business Intelligence Tools
- Business Intelligence and the Data Visualization

#### Data Visualization

- Importance of Data Visualization
- The Visual Data Presentation
- The Data Visualization Tools (infographics, dials and gauges, geographic maps, sparklines, heat maps, and detailed bar, pie and fever charts)



- Painting by Numbers and Playing with Colors in Making Visual Stories

## Activity

## Day 2

### Data Visualization in Python Programming

- Data Science with Python
- Review on Python Fundamentals
- Variables and Data Types (str, numeric, sequence, mapping, set types, Boolean, binary, casting)
- Operators, Lists, Tuples, Sets, Dictionaries
- Conditional Statements
- Functions, Lambda, Arrays, Classes, Objects, Inheritance, Iterators
- Scope, Modules, Dates, JSON, RegEx, PIP
- Try / Except, Command Input, String Formatting
- File Handling

## Activity

## Day 3

### Python and MySQL

- Creating Database and Table
- Manipulating Database (Insert, Select, Update, Delete, Where Statement, Order by)
- Drop Table
- Limit
- Joining Tables
- Removing List Duplicates
- Reverse a String

### Data Visualization with Python and MySQL

- Using Matplotlib (Basic Plotting)
- Dictionaries and Pandas
- Logic, Control Flow and Filtering
- Manipulating Graphs Properties (Font, Size, Color Scheme)

## Activity

## Day 4

### Plotting Data in Different Graph Format

- Histogram
- Line

- Bar
- Box Plot
- Pie Chart
- Donut
- Scatter Plot
- Radar
- Area
- 2D / 3D Density Plot
- Dendogram
- Map (Bubble, Heat)
- Stacked Chart
- Venn Diagram
- Seaborn

## Activity

## Day 5

- Data Visualization with Python and MySQL
- Group Work: Create a Top Management Data Visualization Presentation Using ITDI Local ULIMS Data
- Presentation of Output