Assoc. Prof. Dr. Bora Canbula



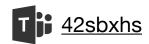
https://github.com/canbula/DataScience/



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Instructor	Course Overview
Institution	Course Over view

Assoc. Prof. Dr. Bora CANBULA Data Science (Teams Code: 42sbxhs)

We are going to try to develop practical data science abilities and programming skills for data science projects in this course. Python is preferred as the programming

language for the applications of this course.

0 (236) 201 21 08

Required Text

Email

Phone

Introduction to Data Science, Springer, L. Igual - S. Segui

bora.canbula@cbu.edu.tr

Data Science Concepts and Practice, Morgan Kaufmann, V. Kotu – B. Deshpande

#### Office Location

#### Course Materials

Dept. of CENG

Python 3.x (Anaconda is preferred)

Office C233

· Jupyter Notebook from Anaconda

Office Hours

Pycharm from JetBrains / Microsoft Visual Studio Code

4 pm – 5 pm, Mondays

PC with a Linux distro or a Linux terminal in Windows 10/11.

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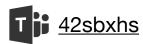
#### Course Schedule

Week	Subject	Week	Subject
01	Basic Concepts in Python	08	Midterm Project Presentations – Part 1
02	Introduction to Data Science with Python	09	Midterm Project Presentations – Part 2
03	Data Collections and Preprocessing	10	Advanced Machine Learning Techniques
04	Exploratory Data Analysis (EDA)	11	Model Deployment and Visualization
05	Feature Engineering and Selection	12	Real-time Data and Model Updating
06	Introduction to Machine Learning Models	13	Final Project Presentations – Part 1
07	Model Evaluation and Hyperparameter Tuning	14	Final Project Presentations – Part 2

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#### **Project Themes**







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### Examples



- Predicting Game Outcomes
- Injury Risk Prediction
- Player Market Value Prediction
- Fan Engagement Analysis
- Athlete Performance Comparison



### Examples

- Stock Market Prediction
- Cryptocurrency Price Prediction
- Consumer Spending Analysis
- Predicting Unemployment Rates
- Credit Scoring Model

### **Economy**

#### Examples



Health

- Disease Outbreak Prediction
- Personalized Health Recommendations
- Health Risk Prediction
- Hospital Readmission Prediction
- Nutritional Deficiency Prediction