

Introduction to Data Science

Binnur Kurt



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Course Content

- > Module 1: Introduction to Data Science
- > Module 2: Fundamentals
- > Module 3: Data Understanding
- > Module 4: Data Pre-Processing, Cleaning, Preparation
- > Module 5: Dimensionality Reduction: Feature Extraction and Feature Selection
- > Module 6: Supervised Learning: Model Selection and Generalization
- > Module 7: Supervised Learning Algorithms
- > Module 8: Unsupervised Learning (Clustering)
- > Module 9: Anomaly Detection
- > Module 10: Data Science on Cloud

Course Information

> Duration

14 Weeks

> Schedule

| Section | Weekday | Time | Room |
|---------|---------|-------------|------|
| 1 | Monday | 16:30-18:20 | B303 |
| 2 | Friday | 12:30-14:20 | D304 |
| 3 | Tuesday | 16:00-17:50 | B404 |

Grading

| | Description | Scoring | Weight (%) |
|--------------|---|---------|------------|
| Quizzes | There are 6 quizzes throughout the semester. The quizzes will be held from Itslearning during lecture hours. There will be no make-up for a missing quiz. | 100 | 10 |
| Homework | There are 4 Homework. There will be no make-up for a missing Homework. | 100 | 20 |
| Midterm Exam | You will have a midterm exam covering the first six weeks. The midterm exam will be given in Week#7. The exact date will be announced later. Midterm will be given face-to-face in the classroom. | 100 | 20 |
| Coursera | https://www.coursera.org/programs/faculty-program-x96ys/professional-certificates/ibm-data-science | 100 | 10 |
| Final Exam | You will have a final exam covering all chapters. Final exam will be given face-to-face in the classroom. | 100 | 40 |
| TOTAL | | 100 | 100 |

Background

- > **1995**, B.Sc., ITU Computer Engineering
- > **1997**, M.Sc., ITU Computer Engineering
- > **2007**, Ph.D., ITU Computer Engineering
- > **1995-2003**, RA, *ITU CE*
- > **2004-2008**, Lecturer, ITU CE
- > **2008-2017**, Consultant and Trainer,
Omega Training & Consultancy
- > **2018-to date**, Founder & CEO , **DEEPCLOUDLABS**
<https://www.deepcloudlabs.com>
- > **2022-to date**, Director of Big Data Education and Research Center, BAU
- > **2022-to date**, Asst. Prof., AI Engineering Department, BAU

Areas of Interest

- > Java Technologies
- > Spring Technologies
- > JavaScript, Nodejs, Client-Side MVC Frameworks (Reactjs/Angular/Vue)
- > MySQL, MySQL Cluster, MongoDB,
- > Software Architecture
- > Oracle Fusion Middleware Technologies
- > Big Data and Machine Learning
- > High-frequency Trading & Low Latency Application Development
- > Crypto-Currency & Block-chain
- > Digital Image & Video Analysis and Processing
- > Real-Time Computer Vision Systems

Trainings Offered

Big Data Machine Learning



Programming



Database Messaging



Application Servers



Frameworks



My Certifications



Contact

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