

İçerik

| Ders Kodu | Dersin Adı | Yarıyıl | Teori | Uygulama | Lab | Kredisi | AKTS |
|-----------|------------------------------------|---------|-------|----------|-----|---------|------|
| INF 511 | Veri Ambarları ve Veri Madenciliği | 1 | 3 | 0 | 0 | 3 | 6 |

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| Ön Koşul | |
| Derse Kabul Koşulları | |

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| Dersin Dili | İngilizce |
| Türü | Seçmeli |
| Dersin Düzeyi | Yüksek Lisans |
| Dersin Amacı | This class aims at introducing the data mining process to students. This includes the description of data preparation and preprocessing, of various data mining algorithms and of the tools available to assess their results. The class focuses on standard approaches regarding association rules mining, supervised classification and unsupervised classification (clustering). Basic statistical knowledge is necessary to understand the mining algorithms and the quality assessment tools. |
| İçerik | association rules - data pre-processing - supervised classification - clustering - complex data mining - results validation and quality assessment |
| Kaynaklar | <ul style="list-style-type: none">• Data Mining - Practical Machine Learning Tools, 2nd edition, Ian H. Witten & Eibe Frank, Morgan Kaufmann, 2005.• Neural Networks - A Comprehensive Foundation, 2nd edition, Simon Haykin, Pearson/Prentice Hall, 1999.• Data Mining: Concepts and Techniques, Jiawei Han & Micheline Kamber, Morgan Kaufmann, 2000.• Applied Statistics and Probabilities for Engineers, 4th edition, D.C. Montgomery & G.C. Runger, John Wiley & sons, 2006.• The Elements of Statistical Learning: Data Mining, Inference, and Prediction, 2nd edition, T. Hastie, R. Tibshirani & J. Friedman, Springer, 2009. |

Teori Konu Başlıkları

| Hafta | Konu Başlıkları |
|-------|--|
| 1 | Introduction |
| 2 | Data preparation |
| 3 | Association rules & a priori algorithm |
| 4 | FP-tree & complex rules |
| 5 | Decision trees & Bayesian approach |
| 6 | Multi-layer perceptron&other classifiers |
| 7 | Classification quality assessment |
| 8 | Lab1 |
| 9 | results comparison |
| 10 | Lab2 |
| 11 | Distance & partitioning |
| 12 | Hierarchical methods, grids & density |
| 13 | Lab3 |
| 14 | Lab4 |