

# BÖLÜM 4

## DUYGU ANALİZİ VE ÇEŞİTLİ İŞLETME UYGULAMALARI

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### GİRİŞ

Web 2.0'ın yükselişi ile doğan mikroblog siteleri, bloglar, forumlar, sosyal medya platformları, insanların varlıklar, olaylar, günlük faaliyetler, küresel sorunlar gibi konularda fikirlerini, deneyimlerini ve duygularını paylaşabilecekleri birer veri kaynağı haline gelmiştir (Kumar & Sebastian, 2012). Web temelli verileri oluşturan bu kaynaklardan hükümetler, kuruluşlar ve işletmeler değerli bilgilere erişim sağlama imkânı yakalamışlardır. Özellikle müşterilerin markalara, ürün ve hizmetlere yönelik görüş ve duygularını internet ve sosyal ağlar aracılığıyla paylaşması, işletmelerin çevrimiçi veri kaynaklarından çok sayıda veriye kolayca ulaşmasını sağlamaktadır (Saggion ve Funk, 2009). Ancak, bu verilerin büyük veri niteliğinde olması, işletme analistleri ve araştırmacılar için hızlı, pratik ve otomatik yöntemleri gerektirmektedir. Bu nedenle çağdaş istatistiksel karar verme yöntemlerinde çeşitli araçlar ortaya çıkmıştır.

Duygu analizi, büyük miktarda bilgiyi analiz ederek insanların bir konu, olay veya varlık hakkında görüşlerini anlamak ve duygularını belirlemek için kullanılan araştırma alanlarından biridir (Xu vd., 2019). İşletmeler için duygu analizi, sosyal medya gönderileri, online kullanıcı içerikleri, müşteri incelemeleri gibi metinsel içeriklerde ifade edilen duyguların tespit edilmesi, analiz edilmesi

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marka kıyaslamaları yapmak suretiyle kişiler açısından da kullanım faydası sağlamaktadır.

İşletme analitiği alanında Vafeiadis ve arkadaşları (2015), bir müşterinin kayıp oranını tahmin etmek için telekomünikasyon endüstrisinde makine öğrenimi yöntemleri ile bir karşılaştırma çalışması gerçekleştirmişlerdir. Çalışma sonucunda %97 doğruluk ve %84 üzerinde F-Ölçüsü ile güçlendirilmiş sınıflandırıcı model elde etmişlerdir.

Bir başka çalışmada ise, sosyal medyanın güncel performansının metinlerdeki konu, beğeni, paylaşım ve yorum sayısına bağlı olduğunu belirten Kurnia ve Suharjito (2018), Twitter ve Facebook gibi sosyal medya sayfalarında yayınlanan haber kanallarının ve konuların performansını ve kalitesini izlemek için bir iş zekası panosu oluşturmuşlardır. Bu pano ile bir konunun haber gönderisini açıklamak üzere SVM, Decision Tree ve Naive Bayes yöntemlerini kullanmışlar ve %77,99 ile SVM algoritmasının en iyi doğruluğu sağladığını tespit etmişlerdir.

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