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Kişisel Bilgiler

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Eğitim Bilgileri

Doktora, İstanbul Teknik Üniversitesi, İşletme Fakültesi, İşletme Mühendisliği Bölümü, Türkiye 2003 - 2009

Yüksek Lisans, İstanbul Teknik Üniversitesi, İşletme Fakültesi, İşletme Mühendisliği Bölümü, Türkiye 1998 - 2003

Lisans, İstanbul Teknik Üniversitesi, İşletme Fakültesi, Endüstri Mühendisliği Bölümü, Türkiye 1993 - 1998

Yabancı Diller

İngilizce

Yaptığı Tezler

Doktora, HIZLI TÜKETİM MALLARI SEKTÖRÜNDE ÇOKLU SEÇİM MODELLERİ, İstanbul Teknik Üniversitesi, İşletme Fakültesi, İşletme Mühendisliği Bölümü, 2009

Yüksek Lisans, PAZARLAMA KARARLARINDA TÜKETİCİ PANELLERİNİN YERİ VE TÜKETİCİ PANELİ VERİLERİNİN ANALİZİ, İstanbul Teknik Üniversitesi, İşletme Fakültesi, İşletme Mühendisliği Bölümü, 2003

Araştırma Alanları

Teknik Bilimler, Endüstri Mühendisliği

Akademik Unvanlar / Görevler

Prof.Dr., İstanbul Teknik Üniversitesi, İşletme, İşletme Mühendisliği, 2021 - Devam Ediyor

Doç.Dr., İstanbul Teknik Üniversitesi, İşletme, İşletme Mühendisliği, 2016 - 2021

Yrd.Doç.Dr., İstanbul Teknik Üniversitesi, İşletme, İşletme Mühendisliği, 2011 - 2016

Öğretim Görevlisi Dr., İstanbul Teknik Üniversitesi, İşletme, İşletme Mühendisliği, 2009 - 2011

Araştırma Görevlisi, İstanbul Teknik Üniversitesi, İşletme, İşletme Mühendisliği, 2005 - 2009

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

I. Customer lifetime value prediction for gaming industry: fuzzy clustering based approach

Tekin A. T., Kaya T., Çebi F.

JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, cilt.42, sa.1, ss.87-96, 2022 (SCI-Expanded)

- II. **Product lifecycle management application selection framework based on interval-valued spherical fuzzy COPRAS**
Omerali M., Kaya T.
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, cilt.42, sa.1, ss.425-438, 2022 (SCI-Expanded)
- III. **An XGBoost-lasso ensemble modeling approach to football player value assessment**
Yigit A. T., Samak B., Kaya T.
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, cilt.39, sa.5, ss.6303-6314, 2020 (SCI-Expanded)
- IV. **Should firms investigating in TOT domain buy or implement in their Industry 4.0 initiatives? An application of Type-2 Fuzzy COPRAS**
Omerali M., Kaya T.
JOURNAL OF INTELLIGENT & FUZZY SYSTEMS, cilt.39, sa.5, ss.6539-6552, 2020 (SCI-Expanded)
- V. **Public investment in care services in Turkey: Promoting employment & gender inclusive growth**
Kim K., İlkkaracan Ajas İ., Kaya T.
JOURNAL OF POLICY MODELING, cilt.41, sa.6, ss.1210-1229, 2019 (SSCI)
- VI. **Monitoring Brand Performance Based on Household Panel Indicators Using a Fuzzy Rank-based Oreste Methodology**
KAYA T.
Journal Of Multiple-Valued Logic And Soft Computing, cilt.31, ss.443-467, 2018 (SCI-Expanded)
- VII. **Solid waste collection system selection for smart cities based on a type-2 fuzzy multi-criteria decision technique**
TOPALOĞLU M., Yarkin F., Kaya T.
SOFT COMPUTING, cilt.22, sa.15, ss.4879-4890, 2018 (SCI-Expanded)
- VIII. **Promoting investment in the Turkish construction sector: a structural path analysis**
Kaya T., Günlük-Şenesen G., Şenesen Ü.
ECONOMIC SYSTEMS RESEARCH, cilt.30, sa.3, ss.422-438, 2018 (SSCI)
- IX. **REGIONAL EMPLOYMENT GENERATION POTENTIAL OF THE TURKISH LABOR MARKET: AN INTER-SECTORAL PERSPECTIVE**
Gunduz U., Kaya T.
TECHNOLOGICAL AND ECONOMIC DEVELOPMENT OF ECONOMY, cilt.23, sa.5, ss.726-741, 2017 (SSCI)
- X. **Performance comparison based on customer relationship management using analytic network process**
Oztaysi B., Kaya T., KAHRAMAN C.
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.8, ss.9788-9798, 2011 (SCI-Expanded)
- XI. **An integrated fuzzy AHP-ELECTRE methodology for environmental impact assessment**
Kaya T., KAHRAMAN C.
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.7, ss.8553-8562, 2011 (SCI-Expanded)
- XII. **Multicriteria decision making in energy planning using a modified fuzzy TOPSIS methodology**
Kaya T., KAHRAMAN C.
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.6, ss.6577-6585, 2011 (SCI-Expanded)
- XIII. **A FUZZY APPROACH TO E-BANKING WEBSITE QUALITY ASSESSMENT BASED ON AN INTEGRATED AHP-ELECTRE METHOD**
Kayal T., KAHRAMAN C.
TECHNOLOGICAL AND ECONOMIC DEVELOPMENT OF ECONOMY, cilt.17, sa.2, ss.313-334, 2011 (SSCI)
- XIV. **Fuzzy multiple criteria forestry decision making based on an integrated VIKOR and AHP approach**
Kaya T., KAHRAMAN C.
EXPERT SYSTEMS WITH APPLICATIONS, cilt.38, sa.6, ss.7326-7333, 2011 (SCI-Expanded)
- XV. **Multi attribute Evaluation of Website Quality in E business Using an Integrated AHP TOPSIS Methodology**
Kaya T.
International Journal of Computational Intelligence Systems, cilt.3, sa.3, ss.301-314, 2010 (SCI-Expanded)
- XVI. **Multicriteria renewable energy planning using an integrated fuzzy VIKOR & AHP methodology: The**

- case of Istanbul**
Kaya T., KAHRAMAN C.
ENERGY, cilt.35, sa.6, ss.2517-2527, 2010 (SCI-Expanded)
- XVII. **Modeling Toothpaste Brand Choice An Empirical Comparison of Artificial Neural Networks and Multinomial Probit Model**
KAYA T., AKTAŞ E., Topcu Y. İ., ÜLENGİN K. B.
International Journal of Computational Intelligence Systems, cilt.3, sa.5, ss.674-687, 2010 (SCI-Expanded)
- XVIII. **Determinants of choice decision in Turkish toothpaste market. An application of brand choice modeling based on diary mode household panel data**
Kaya T., Ulengin B.
İKTISAT ISLETME VE FINANS, cilt.24, sa.278, ss.70-91, 2009 (SSCI)
- XIX. **Türkiye de diş macunu tercihini belirleyen ana etmenler Tüketici paneli verisine dayalı bir marka tercih modeli uygulaması**
Kaya T.
İktisat, İşletme, Finans, cilt.24, sa.278, ss.70-91, 2009 (SSCI)

Dünger Dergilerde Yayınlanan Makaleler

- I. **Spot Welding Parameter Tuning for Weld Defect Prevention in Automotive Production Lines: An ML-Based Approach**
Bayır M., Yücel E., Kaya T., Yıldırım N.
Information (Switzerland), cilt.14, sa.1, 2023 (ESCI)
- II. **An unsupervised learning approach to basket type definition in FMCG sector based on household panel data**
Yigit A. T., Kaya T., Dogruak U.
International Journal of Information and Decision Sciences, cilt.14, sa.3, ss.243-259, 2022 (Scopus)
- III. **The Bullying Game: Sexism Based Toxic Language Analysis on Online Games Chat Logs by Text Mining**
Ekiciler A., Ahioğlu İ., Yıldırım N., Ajas İ. İ., Kaya T.
Journal of International Women's Studies, cilt.24, sa.3, 2022 (Scopus)
- IV. **Investing in Social Care Infrastructure and Employment Generation: A Distributional Analysis of the Care Economy in Turkey**
KİM K., İLKKARACAN AJAS İ., KAYA T.
Levy Economics Institute Working Papers, 2017 (Hakemli Dergi)
- V. **Unraveling the energy use network of construction sector in Turkey using structural path analysis**
KAYA T.
International Journal of Energy Economics and Policy, cilt.7, sa.1, ss.31-43, 2017 (Scopus)
- VI. **Facility Location Selection in Reverse Logistics Using a Type-2 Fuzzy Decision Aid Method**
Temur G. T., Kaya T., Kahraman C.
SUPPLY CHAIN MANAGEMENT UNDER FUZZINESS: RECENT DEVELOPMENTS AND TECHNIQUES, cilt.313, ss.591-606, 2014 (Scopus)
- VII. **İnsaat Kesimi İstihdam mı Yaratıyor Disalımı mı Uyarıyor**
GÜLAY G. Ş., KAYA T., ŞENESEN Ü.
Ekonomi-tek, cilt.2, ss.23-46, 2013 (Hakemli Dergi)
- VIII. **Brand choice modeling based on diary mode panel data: A model of choice decision in turkish cola market**
Kaya T., Ülengin B.
Journal of Euromarketing, cilt.18, sa.2, ss.101-114, 2009 (Scopus)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Salesperson Churn Prediction with Machine Learning Approaches in the Retail Industry**
Cömert G. D., Özcan T., Kaya T.
22nd International Symposium for Production Research, ISPR 2022, Antalya, Türkiye, 6 - 08 Ekim 2022, ss.25-31
- II. **Classification of Authentic and Fake Online Reviews with Supervised Machine Learning Techniques**
Durkaya Kurtcan B., Kaya T.
16th International Conference on Management Science and Engineering Management (ICMSEM), Ankara, Türkiye, 3 - 06 Ağustos 2022, cilt.144, ss.309-319
- III. **Clustering English Premier League Referees Using Unsupervised Machine Learning Techniques**
İspə M., Yarısan U., Kaya T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2021, İstanbul, Türkiye, 24 - 26 Ağustos 2021, cilt.308, ss.230-237
- IV. **National Basketball Association Player Salary Prediction Using Supervised Machine Learning Methods**
Özbalta E., Yavuz M., Kaya T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2021, İstanbul, Türkiye, 24 - 26 Ağustos 2021, cilt.308, ss.189-196
- V. **Marketing Campaign Management Using Machine Learning Techniques: An Uplift Modeling Approach**
Sanisoglu M., Kaya T., Burnaz H. S.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.140-147
- VI. **Decarbonization of Turkey: Text Mining Based Topic Modeling for the Literature**
Yilmaz S., Yesil E., Kaya T.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.372-379
- VII. **Customer Segmentation Using RFM Model and Clustering Methods in Online Retail Industry**
Acar S., Köroğlu F., Duyuler B., Kaya T., Özcan T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2021, İstanbul, Türkiye, 24 - 26 Ağustos 2021, cilt.307, ss.69-77
- VIII. **Stock Price Prediction of Turkish Banks Using Machine Learning Methods**
Egüz B., Çorbacı F. E., Kaya T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2021, İstanbul, Türkiye, 24 - 26 Ağustos 2021, cilt.308, ss.222-229
- IX. **Prediction of Gross Movie Revenue in the Turkish Box Office Using Machine Learning Techniques**
Gurbuz A., Bicer E., Kaya T.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.86-92
- X. **Store Segmentation in Retail Industry Using Clustering Algorithms**
Unal A., Onal M., Kaya T., Özcan T.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.409-416
- XI. **Analysis of Covid-19 News Using Text Mining Techniques**
Cagatay E., Sunnetci B. Y., Orbay S., Kaya T.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.438-445
- XII. **A Supervised Learning Approach to Store Choice Behavior Modeling Using Consumer Panel Metrics**
Sobhani M., Kaya T.
4th International Conference on Intelligent and Fuzzy Systems (INFUS), Bornova, Türkiye, 19 - 21 Temmuz 2022, cilt.505, ss.166-172
- XIII. **Investigation of Turkish Literary Poetry by Unsupervised Text Mining Methods**

- Akgun A. N., Calisir Z. D., Kaya T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2021, İstanbul, Türkiye, 24 - 26 Ağustos 2021,
cilt.307, ss.901-909
- XIV. **A Machine Learning-Based Decision Support System Design for Restraining Orders in Turkey**
Ay H. U., Oner A. A., Yıldırım N., Kaya T.
45th Annual International IEEE-Computer-Society Computers, Software, and Applications Conference (COMPSAC),
ELECTR NETWORK, 12 - 16 Temmuz 2021, ss.1520-1525
- XV. **Customer Churn Prediction in FMCG Sector Using Machine Learning Applications**
Günesen S. N., Şen N., Yıldırım N., Kaya T.
8th IFIP WG 12.6 International Workshop on Artificial Intelligence for Knowledge Management, AI4KM 2021 held
in conjunction with International Joint Conference on Artificial Intelligence, IJCAI 2020, Virtual, Online, 7 - 08 Ocak
2021, cilt.614, ss.82-103
- XVI. **Influencer Identification System Design Using Machine Learning Techniques**
Israfilova E., Arslan A., YILDIRIM N., KAYA T.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 - 23 Temmuz 2020
- XVII. **Exploration of the Waves of Feminism Using Sentiment Based Text Mining Techniques**
AY H. U., KAYA T., GÜNESEN S. N.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 Temmuz 2020,
cilt.1197, ss.850-857
- XVIII. **Basket Patterns in Turkey: A Clustering of FMCG Baskets Using Consumer Panel Data**
Yiğit A. T., KAYA T., DOĞRUAK U.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 - 23 Temmuz 2020,
cilt.1197, ss.71-78
- XIX. **Journey Segmentation of Turkish Tobacco Users Using Sequence Clustering Techniques**
Yiğit A. T., KAYA T., DOĞRUAK U.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 Temmuz 2020,
cilt.1197, ss.79-86
- XX. **Container Terminal Workload Modeling Using Machine Learning Techniques**
ATAK Ü., KAYA T., ARSLANOĞLU Y.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 Temmuz 2020,
cilt.1197, ss.1149-1155
- XXI. **Click Prediction in Digital Advertisements: A Fuzzy Approach to Model Selection**
TEKİN A. T., KAYA T., ÇEBİ F.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Türkiye, 21 Temmuz 2020,
ss.213-220
- XXII. **Car Damage Analysis for Insurance Market Using Convolutional Neural Networks**
ARTAN T., KAYA T.
INFUS 2019, 23 - 25 Temmuz 2019
- XXIII. **Football Player Value Assessment Using Machine Learning Techniques**
YİĞİT A. T., SAMAK B., KAYA T.
INFUS 2019, 23 - 25 Temmuz 2019
- XXIV. **Decomposing the Impact of Sales Promotions on a Large Scale Retailer'xxs Business Performance**
ZEYBEK Ö., KAYA T., ÜLENGİN K. B., ÖZTÜRK I.
INFUS 2019, 23 - 25 Temmuz 2019
- XXV. **Prediction of Turkish Super League Match Results Using Supervised Machine Learning Techniques**
SARİCAOĞLU A. E., AKSOY A., KAYA T.
INFUS 2019, 23 - 25 Temmuz 2019
- XXVI. **Mobile service experience prediction using machine learning methods Makine Öğrenmesi
Yöntemleriyle Mobil Servis Deneyimi Tahmini**
Yiğit I. O., Çiftçi S., Kalyoncu F. A., Kaya T.
26th IEEE Signal Processing and Communications Applications Conference, SIU 2018, İzmir, Türkiye, 2 - 05 Mayıs

2018, ss.1-4

- XXVII. **Mobile Service Experience Prediction Using Machine Learning Methods**
Yigit I. O., Ciftci S., Kalyoncu F. A., Kaya T.
26th IEEE Signal Processing and Communications Applications Conference (SIU), İzmir, Türkiye, 2 - 05 Mayıs 2018
- XXVIII. **Investing in Social Care Infrastructure and Employment Generation: A Distributional Analysis of the Care Economy in Turkey.**
İLKKARACAN AJAS İ., Kim K., KAYA T.
Conference on Gender and Macroeconomics IMF Headquarters, Washington, D.C., 23 - 24 Mart 2017
- XXIX. **The Impact of Public Investment in Social Care Services on Employment Gender Equality and Poverty The Turkish Case**
İLKKARACAN AJAS İ., KAYA T., Kim K.
Eastern Economics Association Annual Conference, Washington, Kiribati, 19 - 21 Kasım 2016
- XXX. **Impact of Public Investment in Social Care Services on Employment Gender Equality and Poverty**
İLKKARACAN AJAS İ., KİM K., KAYA T.
Eastern Economics Association Annual Conference, 23 - 26 Şubat 2016
- XXXI. **Evaluation of Alternative Energy Scenarios for Turkey using Bayesian Network Analysis**
FAHMİ A., KAYA T.
International Symposium on Energy System Optimization, ISES 2015, Heidelberg, Germany, 9 - 10 Kasım 2015
- XXXII. **Investing in Social Care Services A Strategy for Inclusive Growth**
İLKKARACAN AJAS İ., KIJONG K., KAYA T.
14th International Annual Conference of the Middle Eastern Economics Association (MEEA), 23 - 25 Mart 2015
- XXXIII. **Investing in Social Care A Strategy for Inclusive Growth**
İLKKARACAN AJAS İ., KAYA T., Kim K.
14th International Conference of the Middle Eastern Economics Association, 23 - 25 Mart 2015
- XXXIV. **Import Dependency Effects of the Turkish Construction Sector A Structural Path Analysis Approach**
GÜLAY G. Ş., KAYA T., ÜMİT Ş.
Third International Conference on Economics, ICE-TEA, İzmir, Türkiye, 1 - 03 Kasım 2012
- XXXV. **Regional Employment Generation Potential of the Turkish Labor Market**
UMUT G., KAYA T.
Third International Conference on Economics, ICE-TEA, İzmir, Türkiye, 1 - 03 Kasım 2012
- XXXVI. **The construction Sector in Turkey A structural Path Analysis of the Employment and Import Linkages**
ŞENESEN G. G., KAYA T., ŞENESEN Ü.
20th International Input-Output Conference, 26 - 29 Haziran 2012
- XXXVII. **FUZZY MULTIPLE CRITERIA SUSTAINABILITY ASSESSMENT IN FOREST MANAGEMENT BASED ON AN INTEGRATED AHP TOPSIS METHODOLOGY**
DURSUN P., KAYA T.
The 9th International FLINS Conference, Chengdu-Emei, Çin, 2 - 04 Ağustos 2010
- XXXVIII. **An Empirical Model of Brand choice in Turkish Snacks Market**
KAYA T., ÜLENGİN K. B.
EBES 2009 Conference, İstanbul, Türkiye, 1 - 02 Haziran 2009
- XXXIX. **The Impact of Price Changes and Household Specific Attributes on the Choice Behavior of CSD Consumers**
KAYA T., ÜLENGİN K. B.
IFAC Cefis'07, İstanbul, Türkiye, 21 - 22 Ekim 2007
- XL. **A Market Share Prediction Model Based on Household Panel Data**
KAYA T., ÜLENGİN K. B.
INFORMS Marketing 2007 Conference, Singapur, 26 - 30 Haziran 2007

Desteklenen Projeler

Üre N. K., Çakır M. A., Öğüdücü Ş., Ünal G., Eryiğit G., Tosun Kühn A., Oktuğ S. F., Kaya T., İnce G., Ovatman T., et al., Yükseköğretim Kurumları Destekli Proje, Türkiye'nin Öncelikli Alanları için Yapay Zeka Teknolojileri Geliştirilmesi için Altyapı Oluşturma ve Ön Bilimsel Çalışmaları Başlatma, 2019 - 2022
Aşıcı A. A., Kaya T., TÜBİTAK Projesi, Türkiye'nin Mutluluk/Mutsuzluk Patikaları ve Zaman İçinde Gelişimleri: Sınıflandırma Ağacı Yaklaşımı, 2019 - 2021
Kaya T., Diğer Özel Kurumlarca Desteklenen Proje, Türkiye'de Hızlı Tüketim Malları Sektöründe Alışveriş Yolculuklarının ve Müşteri Kayıplarının Veri Analitiği Teknikleriyle İncelenmesi, 2019 - 2020
Kaya T., Diğer Özel Kurumlarca Desteklenen Proje, Türkiye'de Hızlı Tüketim Malları Sektöründeki Tüketicilerin ve Alışveriş Sepetlerinin Alışveriş Büyüklüğü, Sepetlerdeki Ürün Çeşitliliği ve Tüketicilerin Özelliklerine Göre Kümelenmesi, 2018 - 2019
Kaya T., Yükseköğretim Kurumları Destekli Proje, Türkiye İnşaat Kesimi İstihdam ve İthalat Geriye Bağ Yapısının Yol Çözümlememesi, 2012 - 2018
Kaya T., Diğer Uluslararası Fon Programları, The Impact of Public Investment in Social Care Services on Employment Gender Equality and Poverty ITU WSC SET the Levy Economics Institute ILO UNDP and UN Women İstanbul 2015, 2014 - 2015

Metrikler

Yayın: 84
Atıf (WoS): 1093
Atıf (Scopus): 1258
H-İndeks (WoS): 9
H-İndeks (Scopus): 9

Akademi Dışı Deneyim

TRIA Araştırma ve Danışmanlık Hizmetleri
HTP Araştırma ve Danışmanlık Hizmetleri