

Asst. Prof. İLKER KÖSE

Personal Information

Email: ikose@ticaret.edu.tr

Web: <https://avesis.ticaret.edu.tr/ikose>

International Researcher IDs

ORCID: 0000-0002-5549-5579

Publons / Web Of Science ResearcherID: P-9447-2015

Yoksis Researcher ID: 236056

Education Information

Doctorate, Gebze Technical University, Natural Sciences, Computer Engineering, Turkey 2007 - 2015

Postgraduate, Gebze Technical University, Natural Sciences, Computer Engineering, Turkey 2000 - 2003

Undergraduate, İstanbul University-Cerrahpaşa, Faculty Of Engineering, Department Of Electrical And Electronics Engineering, Turkey 1994 - 1999

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, İnteraktif makine öğrenmesi kullanılarak, aktör-metâ ilişkisinin analizi ile sağlık geri ödeme sistemlerinde proaktif suistimal tespiti modeli, Gebze Technical University, Natural Sciences, Computer Engineering, 2015

Postgraduate, Moleküler tasarım için bilimsel veritabanı geliştirme ve ortak kullanıma hazırlama, Gebze Technical University, Natural Sciences, Computer Engineering, 2003

Academic Titles / Tasks

Assistant Professor, İstanbul Commerce University, Mühendislik Fakültesi, Yazılım Mühendisliği (İngilizce) Bölümü, 2024 - Continues

Assistant Professor, Alanya Hamdullah Emin Pasa University, Engineering Faculty, Computer Engineering, 2023 - 2024

Assistant Professor, İstanbul Medipol University, İşletme Ve Yönetim Bilimleri Fakültesi, Yönetim Bilişim Sistemleri Bölümü, 2016 - 2022

Lecturer, İstanbul Medipol University, Sağlık Bilimleri Fakültesi, Sağlık Yönetimi Bölümü, 2009 - 2016

Academic and Administrative Experience

Rector's Advisor, Alanya Hamdullah Emin Pasa University, 2023 - 2024

BAP Coordinator, İstanbul Medipol University, Rektörlük, 2014 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **JCI, SKS için bir dizi standart ve gösterge önerisine HIMSS-EMRAM kalite değerlendirme modelleri**
Cece S., Köse İ.
Digital Health, vol.10, 2024 (SCI-Expanded)
- II. **Basic electronic health record (EHR) adoption in **Türkiye is nearly complete but challenges persist**
Köse İ., Cece S., Yener S., Seyhan S., Özge Elmas B., Rayner J., Birinci Ş., Mahir Ülgü M., Zehir E., Gündoğdu B.
BMC Health Services Research, vol.23, no.1, 2023 (SCI-Expanded)
- III. **The effect of digitalization of nursing forms in ICUs on time and cost**
Yilmaztürk N., Kose İ., Cece S.
BMC Nursing, vol.22, no.1, 2023 (SCI-Expanded)
- IV. **Adoption rates of electronic health records in Turkish Hospitals and the relation with hospital sizes**
Kose İ., Rayner J., Birinci S., Ulgu M. M., Yilmaz I., Guner S., Mahir S. K., Aycil K., Elmas B. O., Volkan E., et al.
BMC Health Services Research, vol.20, no.1, 2020 (SCI-Expanded)
- V. **An interactive machine-learning-based electronic fraud and abuse detection system in healthcare insurance**
Kose İ., Gokturk M., Kilic K.
Applied Soft Computing Journal, vol.36, pp.283-299, 2015 (SCI-Expanded)

Articles Published in Other Journals

- I. **Analysis of the effect of digital hospital efforts on paper savings in inpatient procedures and on the duration of nursing care services**
VOLKAN E., KÖSE İ., CECE S., Elmas B. Ö.
FOSTER : JOURNAL OF ENGLISH LANGUAGE TEACHING, vol.6, 2024 (ESCI)
- II. **Can Nationwide Central Appointment Systems Reduce Waiting Times in Turkish Public Hospitals?**
ÖZEN O., KÖSE İ., YİĞİT P., GÜNER Ş., AYDIN S.
Journal of Health Systems and Policies, vol.6, no.1, pp.1-26, 2024 (Peer-Reviewed Journal)
- III. **Analysis of Density and Patient Wait Times In Terms of System Management In Turkish Hospitals: Setting A Pattern by Days and Hours of The Week**
ÖZEN O., KÖSE İ., YİĞİT P., GÜNER Ş., AYDIN S.
Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi, vol.13, no.1, pp.441-452, 2024 (Peer-Reviewed Journal)
- IV. **Electronic Health Record Adoption in Oral and Dental Health Centres in Turkey**
KÖSE İ., CANOL S., Yener S., Seyhan S., Elmas B. Ö., Rayner J., BİRİNCİ Ş., ÜLGÜ M. M., Zehir E., Gündoğdu B.
JOURNAL OF HEALTH MANAGEMENT, vol.1, no.1, pp.1-10, 2024 (ESCI)
- V. **The Effect of Clinical Decision Support System on the Rates of Patients Who Reapply to the Emergency Department with the Same Diagnosis**
Özkan E., KÖSE İ.
Genel Tıp Dergisi, vol.33, no.5, pp.637-642, 2023 (Peer-Reviewed Journal)
- VI. **Sağlık Bilişimi Çalışmalarında Sektörler Arası İş Birliği Düzeyinin Analizi**
KÖSE İ., Güner Ş., Yıldız A. E., Topaylı E.
Sağlık ve Hemşirelik Yönetimi Dergisi, vol.10, no.2, pp.261-272, 2023 (Peer-Reviewed Journal)
- VII. **Üniversite Özelliklerinin Girişimci ve Yenilikçi Üniversite Endeksi Üzerindeki Etkilerinin Sistematik Analiz Yoluyla Değerlendirilmesi**
KÖSE İ., Güner Ş.
Ekonomi İşletme ve Maliye Araştırmaları Dergisi, vol.5, no.2, pp.76-93, 2023 (Peer-Reviewed Journal)
- VIII. **Treatment Prediction Using Artificial Intelligence-Integrated Chatbots in Call Centers in Medical Tourism**
Yener S., KÖSE İ.
Turkish Studies - Economics, Finance, Politics , vol.18, no.2, pp.583-597, 2023 (Peer-Reviewed Journal)
- IX. **Proposal of a Model Framework For Measuring Innovation Performance in Health**

- GÜNER Ş., KÖSE İ.
İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, vol.22, no.46, pp.333-355, 2023 (Peer-Reviewed Journal)
- X. **İstanbul'da Kamu Hastanelerinde Sağlık Hizmet Süreçlerinde Bekleme Sürelerinin Analizi**
Teyin B., YİĞİT P., ÖZEN O., KÖSE İ., AYDIN S.
Kırıkkale Üniversitesi Tıp Fakültesi Dergisi, vol.24, no.3, pp.526-532, 2022 (Peer-Reviewed Journal)
- XI. **Comparative Analysis of Joint Commission International and Healthcare Information and Management Systems - Electronic Medical Record Adoption Model Measurement Models using Text Mining**
CECE S., KÖSE İ.
Sağlık ve Hemşirelik Yönetimi Dergisi, vol.9, no.3, pp.371-382, 2022 (Peer-Reviewed Journal)
- XII. **Comparative Analysis of HQS, JCI and HIMSS Assessment Models Widely Used in Turkey**
CECE S., KÖSE İ.
OPUS Uluslararası Toplum Araştırmaları Dergisi, vol.19, no.50, pp.853-862, 2022 (Peer-Reviewed Journal)
- XIII. **Are electronic health records beneficial or not?**
KÖSE İ., CANOL S., Bayraktar E.
Journal of Health Systems and Policies, vol.4, no.1, pp.1-20, 2022 (Peer-Reviewed Journal)
- XIV. **Sağlıkta Kalite Çalışmalarında Sektörler Arası İş Birliği Düzeyi**
KÖSE İ., Güner Ş., Gevrek F.
Türkiye Sağlık Enstitüleri Başkanlığı Dergisi, vol.4, no.2, pp.1-13, 2021 (Peer-Reviewed Journal)
- XV. **Analysis of drug-food interactions in inpatient treatment: A university hospital case**
KÖSE İ., GENÇYÜREK G., ALTINBAŞ ATAN Z., ELMAS B. Ö.
Medical Research Archives, vol.9, no.2, pp.2-11, 2021 (Peer-Reviewed Journal)
- XVI. **Effect of Closed Loop Medication Administration on Drug Returns in Inpatient Facilities**
Öztürk E., KÖSE İ., Elmas B. Ö.
Medical Research Archives, vol.8, no.12, pp.1-10, 2020 (Peer-Reviewed Journal)
- XVII. **Creative Problem Solving Technique Application Areas of TRIZ: Suggestions for Use in Healthcare Sector**
Güner Ş., KÖSE İ.
Ekonomi İşletme ve Maliye Araştırmaları Dergisi, vol.2, no.2, pp.185-205, 2020 (Peer-Reviewed Journal)
- XVIII. **A new approach that proposes TRIZ as a creative problem solving technique in health services**
Güner Ş., KÖSE İ.
Research Journal of Business and Management, vol.2, pp.67-79, 2020 (Peer-Reviewed Journal)
- XIX. **The Evaluation of DRG Application from The Point of Healthcare Managers in Turkey**
Aycil K., KÖSE İ.
Journal of Health Systems and Policies, vol.2, no.1, pp.33-55, 2020 (Peer-Reviewed Journal)
- XX. **The Evaluation of the Health Information Systems by the Health Information System Managers Within the Research and Teaching Hospitals Affiliated with the University of Health Sciences**
Bolat A., KÖSE İ., HAYRAN O. E.
Journal of Health Systems and Policies, vol.1, no.3, pp.144-173, 2019 (Peer-Reviewed Journal)
- XXI. **The Correlation Analysis of Relative Values of Drugs and the Health Service Tariffs in Private Health Insurance System in Turkey**
Gençyürek G., KÖSE İ.
Journal of Health Systems and Policies, vol.2, no.1, pp.63-77, 2019 (Peer-Reviewed Journal)
- XXII. **The Correlation Analysis of Relative Values of DRGs and the National Health Public Health Service Tariffs in Turkey**
Elmas B. Ö., KÖSE İ.
Journal of Health Systems and Policies, vol.1, no.1, pp.53-71, 2019 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Dijital Hastane Değerlendirmesi: HIMSS ve EMRAM**
KÖSE İ., Elmas B. Ö.
in: Sağlık Hizmetlerinde Denetim ve Değerlendirme, Mustafa Said Yıldız, Editor, Nobel Bilimsel Eserler, Ankara, pp.213-223, 2023
- II. **İntravasküler Ultrasonografi ve Makine Öğrenmesi**
KÖSE K. B., KÖSE İ.
in: Tanısal Ultrasonografi-Derin Öğrenme-Yapay Zekâ, Irmak Durur Subaşı; Hasan Fehmi Ateş, Editor, Türkiye Klinikleri, Ankara, pp.88-92, 2022
- III. **Veri Madenciliği ve Sağlık Bilimindeki Uygulamaları**
KÖSE İ.
in: Hemşirelik Bilişimi, Aydın Ateş, Nuran; Seçginli, Selda; Silahtaroglu, Gökhan, Editor, ACR Tıp Kitapevi, İstanbul, pp.189-212, 2022
- IV. **Jeopolitik Perspektiften Türkiye Bilim ve Teknoloji Politikaları**
KÖSE İ.
İstanbul Medipol Üniversitesi Yayınları, İstanbul, 2021
- V. **A New Innovation Management Model That Contributes Financially for Better Competitive Companies**
KÖSE İ., GÜNER Ş.
in: Financial Strategies in Competitive Markets, Dinçer Hasan, Yüksel Serhat, Editor, Springer, Cham, pp.237-250, 2021
- VI. **Sağlık Bilişimi**
KÖSE İ.
İstanbul Medipol Üniversitesi Yayınları, İstanbul, 2020
- VII. **Sağlık İletişim Teknolojileri**
KÖSE İ.
in: Sağlık İletişimi Makro Perspektif, Erdem Ramaza, Bostan Sedat, Yılmaz, Ali, Editor, Nobel, Ankara, pp.59-72, 2020
- VIII. **HIMSS EMRAM Modeli**
KÖSE İ.
in: Sağlık Hizmetlerinde Kalite, Hasan Güler, Editor, İstanbul Medipol Üniversitesi Yayınları, İstanbul, pp.75-88, 2020
- IX. **Veri Madenciliği Teori Uygulama ve Felsefesi**
KÖSE İ.
Papatya Bilim, İstanbul, 2018
- X. **Sağlık Bilgi Sistemleri**
KÖSE İ.
in: Sağlık Diplomasisi, Olcay Özen, Editor, İstanbul Medipol Üniversitesi Yayınları, İstanbul, pp.321-351, 2017
- XI. **Büyük veri ve bilimi ile sahteciliğin ve suistimalin önlenmesi**
KÖSE İ., KILIÇ K.
in: Büyük Veri ve Açık Veri Analitiği, Prof. Dr. Şeref Sağlıroğlu Dr. Orhan Koç, Editor, Grafiker, Ankara, pp.233-250, 2017
- XII. **Science And Technology Policies In Turkey**
KÖSE İ.
in: Researches on Science and Art in 21st Century Turkey, Hasan Arapgirlioğlu Atilla Atik Robert L. Elliot Edward Turgeon, Editor, Gece Kitaplığı, Ankara, pp.1759-1774, 2017
- XIII. **Ulusal Sağlık Veri Sözlüğü 1.1**
KÖSE İ., Arslan Y., Gürel M. M., Kırıcı S., Özer H., Sabur E.
Türkiye Cumhuriyeti Sağlık Bakanlığı, Bilgi İşlem Daire Başkanlığı, Ankara, 2008
- XIV. **Ulusal Sağlık Veri Sözlüğü 1.0**
KÖSE İ., Arslan Y., Gürel M. M., Kırıcı S., Özer H., Sabur E.
Türkiye Cumhuriyeti Sağlık Bakanlığı, Bilgi İşlem Daire Başkanlığı, Ankara, 2007

Refereed Congress / Symposium Publications in Proceedings

- I. **Elektronik Sağlık Kaydının Benimsenmesinde Hasta Katılımın Önemi: Türkiye’de Birinci Basamak Sağlık Kuruluşları Örneği**
KÖSE İ., CECE S., Seyhan S.
11th International Medicine and Health Sciences Researches Congress, Ankara, Turkey, 24 - 25 December 2022, vol.1, pp.185-186
- II. **Sağlık Turizmi Hastalarına Uygulanacak Saç Ekimi Tedavilerinin Veri Madenciliği Yöntemleri İle Tahmin Edilmesi**
Yener S., KÖSE İ.
11th International Medicine and Health Sciences Researches Congress, Ankara, Turkey, 24 - 25 December 2022, pp.193
- III. **Chatbot Kullanan Hastaların Tedavi Olma Kararının Makine Öğrenmesi Yöntemi ile Tahmin Edilmesi: Bir Saç Ekim Merkezi Örneği**
Seyhan S., KÖSE İ.
2. Uluslararası Gazi Sağlık Bilimleri Kongresi, Çevrimiçi, Turkey, 15 - 17 December 2022, vol.1, pp.217
- IV. **Kanıt Dayalı Elektronik Karar Destek Sistemi Geliştirme Eğitimi Projesi**
AYDIN ATEŞ N., KÖSE İ., Kapanıcı M.
7. Uluslararası 18. Ulusal Hemşirelik Kongresi, Konya, Turkey, 22 - 25 September 2022, pp.299-300
- V. **Yatan Hasta Düşme Riski Önlemeye Yönelik Kanıt Dayalı Klinik Karar Destek Sistemi**
AYDIN N., KÖSE İ., KÜÇÜMEN G., CECE S., Alp A. M.
7. Uluslararası 18. Ulusal Hemşirelik Kongresi, Konya, Turkey, 22 - 25 September 2022, pp.298
- VI. **Effect of closed-loop medication administration on medication billing leakage: A case study**
Eraltuğ Z., Üzümoğlu G., Bolat Ö., Özkan E., AYDIN N., KÖSE İ.
AMIA 2020 Virtual Clinical Informatics Conference, 19 - 21 May 2020
- VII. **The effects of a nursing care plan incorporated with a decision support system on ventilator associated pneumonia: A case study**
Bolat O., Gulenc N., Ozkan E., AYDIN N., Kose İ.
13th International Conference on Health Informatics, HEALTHINF 2020 - Part of 13th International Joint Conference on Biomedical Engineering Systems and Technologies, BIOSTEC 2020, Valletta, Malta, 24 - 26 February 2020, pp.693-698
- VIII. **A Case Study of the Extended Interactive Innovation Management Model in Insurance Company**
KÖSE İ., Güner Ş., İşgüzerer B., Şişli M. E.
13th European Conference on Innovation and Entrepreneurship, Aveiro, Portugal, 20 - 21 September 2018, pp.375-383
- IX. **Sağlık Geri Ödeme Sistemlerinde Kural Dışı Davranış Tespitinde Aktör Metâ Odaklı Yaklaşım**
KÖSE İ., GÖKTÜRK M., KILIÇ K.
Ulusal Tıp Bilişimi Kongresi, Mağusa, Cyprus (Kkct), 14 - 17 October 2010, pp.1-15
- X. **Sağlık Sigortası Geri Ödemelerinde Kuraldışı Davranış Tespiti**
KÖSE İ., GÖKTÜRK M., KILIÇ K.
Yöneyem Araştırması ve Endüstri Mühendisliği (YAEM) 30. Ulusal Kongresi 30. Ulusal Kongres, İstanbul, Turkey, 30 June - 02 July 2010
- XI. **Turkey's National Health Information System NHIS**
KÖSE İ., Akpınar N., Gürel M., Arslan Y., Özer H., Yurt N., Kabak Y., Doğaç A.
e-Challenges, Stockholm, Sweden, 22 - 24 October 2008, pp.170-177
- XII. **Testing the Conformance and Interoperability of NHIS to Turkey s HL7 Profile**
Namlı T., Aluç G., Sınacı A. A., KÖSE İ., Akpınar N., Gürel M., Arslan Y., Özer H., Yurt N., Kırıcı S., et al.
9th International HL7 Interoperability Conference IHIC, Girit, Greece, 8 - 11 October 2008, pp.49-55
- XIII. **The Use of HL7 CDA in the National Health Information System NHIS of Turkey**
Namlı T., KÖSE İ.
International HL7 Interoperability Conference (IHIC), Girit, Greece, 8 - 11 October 2008, pp.49-55

XIV. A Problem Oriented Database As A Tool For The Data On The Structure Activity Relationships Accumulation Integration And Exchange

KÖSE İ., Shvets N., SOĞUKPINAR İ.

International Symposium on Artificial Intelligence and Neural Networks, Çanakkale, Turkey, 2 - 04 July 2003, pp.1-3

XV. Molecular Modeling in the ETOSAR Software

KÖSE İ., Shvets N., SOĞUKPINAR İ.

International Modelling Stability Conference, Kiev, Ukraine, 27 - 30 May 2003, pp.1-10

Supported Projects

Köse İ., Alayoğlu N., Yüksel S., Kılıç K., TUBITAK Project, TÜBİTAK ARDEB 3005 (Proje No: 122G080) - Sağlık Hizmet Kurumlarında İnovasyon Performansının Geliştirilmesinde Etkili Olan Kriterlerin Tespiti ve Türkiye Sağlık Sistemine Uygun Özgün Bir Kurumsal İnovasyon Olgunluk Modelinin Geliştirilmesi, 2022 - 2024

Köse İ., TUBITAK Project, TÜBİTAK TEYDEB 1601 (Proje No: 4200026) - İstanbul Medipol Üniversitesi - TÜBİTAK BİGG Programı İçin Sağlık Odaklı Girişimci Yetiştirme Mekanizmasının Geliştirilmesi ve Uygulanması, 2020 - 2022

Köse İ., TUBITAK Project, TÜBİTAK TEYDEB 1511 (Proje No: 1190066) Parkinson Hastalığının Tedavi ve Takip Sürecine Yardımcı Akıllı Platform, 2020 - 2021

Köse İ., TUBITAK Project, Sağlık Geri Ödeme Sistemlerinde Kuraldışı Davranışların Tespiti, 2008 - 2011

Scientific Refereeing

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Commerce University, Turkey, November 2024

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Alanya Hamdullah Emin Pasa University, Turkey, April 2024

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Alanya Hamdullah Emin Pasa University, Turkey, April 2024

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Alanya Hamdullah Emin Pasa University, Turkey, February 2024

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, Alanya Hamdullah Emin Pasa University, Turkey, February 2024

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Alanya Hamdullah Emin Pasa University, Turkey, January 2024

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Alanya Hamdullah Emin Pasa University, Turkey, December 2023

TUBITAK Project, 1002 - Quick Support Program, Istanbul Medipol University, Turkey, October 2022

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, April 2021

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, October 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, October 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, October 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, April 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, April 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, April 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, January 2020

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, August 2019

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, July 2019

TUBITAK Project, 1003 - Priority Areas R&D Projects Support Program, Istanbul Medipol University, Turkey, May 2019

TUBITAK Project, 1003 - Priority Areas R&D Projects Support Program, Istanbul Medipol University, Turkey, May 2019

TUBITAK Project, 1003 - Priority Areas R&D Projects Support Program, Istanbul Medipol University, Turkey, May 2019

TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, February 2019
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, January 2019
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, August 2018
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, November 2016
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, June 2016
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, May 2016
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, May 2016
TUBITAK Project, 1501 - Industry R & D Projects Support Program, Istanbul Medipol University, Turkey, May 2016

Metrics

Publication: 56

Citation (Scopus): 117

H-Index (Scopus): 2

Invited Talks

What will be the standards for Smart Hospitals in Turkey? What will be the preparations that hospitals need to make within the framework of the new standards?, Conference, HIMSS Eurasia Health Informatics and Technologies Education, Conference and Exhibition, Turkey, December 2024

Non Academic Experience

Business Establishment Private, Sağlık 40 Bilişim Teknoloji İnovasyon Araştırma ve Geliştirme Hizmetleri A.Ş., Genel Müdürlük

Business Establishment Private, Golden Gateway Holding A.Ş., Genel Müdürlük

Business Establishment Private, İstanbul Medipol Üniversitesi Teknoloji Transfer Ofisi A.Ş., Genel Müdürlük

Business Establishment Private, CompuGroup Medikal Bilgi Sistemleri A.Ş., Araştırma Geliştirme Direktörlüğü

Ministry, T.C. Sağlık Bakanlığı, Bilgi İşlem Daire Başkanlığı

State Economic Enterprise SEE, Metro İstanbul A.Ş., Bilgi İşlem