Asst. Prof. GÖZDE KARATAŞ BAYDOĞMUŞ

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Education

Doctorate, Marmara University, Faculty of Technology, Computer Engineering, Turkey 2015 - 2020
Postgraduate, Istanbul Kultur University, Faculty Of Engıneerıng, Department Of Computer Engıneerıng, Turkey 2013 - 2015
Undergraduate, Istanbul Kultur University, Faculty Of Arts And Scıences, Department Of Mathematıcs And Computer, Turkey 2009 - 2013

Dissertations

Doctorate, Derin öğrenme tabanlı saldırı tespit sistemi, Marmara University, Institute for Graduate Studies in Pure and Applied Sciences, Department of Computer Engineering, 2020
Postgraduate, Dağıtık veritabanları için test uygulaması, Istanbul Kultur University, Faculty Of Engıneerıng, Department Of Computer Engıneerıng, 2015

Research Areas

Avesis Research Areas: Computer Sciences
WoS Research Areas: Computer Science
Scopus Research Areas: General Computer Science

Academic Positions

Assistant Professor, Marmara University, Faculty of Technology, Computer Engineering, 2022 - Present
Assistant Professor, Biruni University, Faculty Of Engıneerıng And Natural Scıences, Department Of Computer Engıneerıng, 2021 - 2022
Research Assistant, Istanbul Kultur University, Faculty Of Arts And Scıences, Department Of Mathematıcs And Computer, 2013 - 2021

Academic and Administrative Experience

Deputy Head of Department, Marmara University, Faculty of Technology, Computer Engineering, 2024 - Present

Supervised Theses

Demir Ö., Karataş Baydoğmuş G., Kolektif Makine Öğrenmesi Tabanlı Ağ Saldırı Tespiti, Postgraduate, Ş.EMANET(Student), 2022

Articles

I. **Decentralized Disease Prediction: A Federated Learning Perspective**
Demir A., Kulaksız A. Y., Büyüktanır B., KARATAŞ BAYDOĞMUŞ G., Yıldız K.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.26, no.2, pp.337-353, 2026 (TRDizin)

II. **Federated learning in intrusion detection: advancements, applications, and future directions**
BÜYÜKTANIR B., Altinkaya Ş., KARATAŞ BAYDOĞMUŞ G., YILDIZ K.
Cluster Computing, vol.28, no.7, 2025 (SCI-Expanded, Scopus)

III. **Awareness with Machine: Hybrid Approach to Detecting ASD with a Clustering**
KARATAŞ BAYDOĞMUŞ G., DEMİR Ö.
Computers, Materials and Continua, vol.84, no.2, pp.3393-3406, 2025 (SCI-Expanded, Scopus)

IV. **So-haTRed: A novel hybrid system for Turkish Hate Speech Detection in Social Media with Ensemble Deep Learning improved by BERT and clustered-Graph Networks**
Altinel A. B., Sahin S., Gurbuz M. Z., Karataş Baydoğmuş G.
IEEE Access, vol.12, pp.86252-86270, 2024 (SCI-Expanded, Scopus)

V. **An ensemble learning based IDS using Voting rule: VEL-IDS**
Emanet S., KARATAŞ BAYDOĞMUŞ G., DEMİR Ö.
PeerJ Computer Science, vol.9, pp.1-23, 2023 (SCI-Expanded, Scopus)

VI. **Solution for TSP/mTSP with an Improved Parallel Clustering and Elitist ACO**
KARATAŞ BAYDOĞMUŞ G.
Computer Science and Information Systems, vol.29, no.1, pp.195-214, 2023 (SCI-Expanded, Scopus)

VII. **Öznitelik Seçme Yöntemlerinin Makine Öğrenmesi Tabanlı Saldırı Tespit Sistemi Performansına Etkileri**
Emanet Ş., KARATAŞ BAYDOĞMUŞ G., DEMİR Ö.
Dicle Üniversitesi Mühendislik Fakültesi Mühendislik Dergisi, vol.12, no.5, pp.743-755, 2021 (TRDizin)

VIII. **Detecting Internet of Things Attacks by Using Hybrid Learning and Feature Selection Method**
KARATAŞ BAYDOĞMUŞ G.
Avrupa Bilim ve Teknoloji Dergisi, no.29, pp.19-25, 2021 (TRDizin)

IX. **Deep Learning Based Security Management of Information Systems: A Comparative Study**
çebi c. b., bulut f. s., fırat h., ŞAHİNGÖZ Ö. K., KARATAŞ G.
Journal of Advances in Information Technology, vol.11, no.3, pp.135-142, 2020 (Scopus)

X. **Increasing the Performance of Machine Learning-Based IDSs on an Imbalanced and Up-to-Date Dataset**
Karatas G., Demir Ö., Şahingöz Ö. K.
IEEE ACCESS, vol.8, pp.32150-32162, 2020 (SCI-Expanded, Scopus)

XI. **Saldırı Tespit Sistemlerinde Makine Öğrenmesi Modellerinin Karşılaştırılması**
CEBİ C. B., BULUT F. S., FIRAT H., KARATAŞ G., ŞAHİNGÖZ Ö. K.
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.12, no.3, pp.1513-1525, 2019 (TRDizin)

XII. **Survey on Access Control Mechanisms in Cloud Computing**
KARATAŞ G., AKBULUT A.
Journal of Cyber Security and Mobility, vol.7, no.3, pp.1-36, 2018 (Scopus)

XIII. **Automated testing for distributed databases with fuzzy fragment reallocation**

Akbulut A., Karatas G.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.26, no.2, pp.677-692, 2018 (SCI-Expanded, Scopus, TRDizin)

XIV. **Mobil Cihazlarda Güvenlik Tehditler Temel Stratejiler.**
KARATAŞ G., AKBULUT A., ZAİM A. H.
İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, vol.15, no.30, pp.55-75, 2016 (TRDizin)

Papers Presented at Peer-Reviewed Scientific Conferences

I. **CNN and LSTM-Based In-Memory Malware Detection: Performance Improvement with Transfer Learning**
Ozdemir S. N., KARATAŞ BAYDOĞMUŞ G., DEMİR Ö.
7th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, ICHORA 2025, Ankara, Turkey, 23 - 24 May 2025, (Full Text)

II. **A Systematic Mapping Study on Machine Unlearning in Federated Learning**
Büyüktanır B., Yıldız K., Karataş Baydoğmuş G.
7th International Congress on Human-Computer Interaction, Optimization and Robotic Applications, ICHORA 2025, Ankara, Turkey, 23 - 24 May 2025, (Full Text)

III. **Obtaining the Dominating Set in Graphs with the Invasive Weed Optimization Algorithm**
KARCI Ş., KARATAŞ BAYDOĞMUŞ G.
8th International Artificial Intelligence and Data Processing Symposium, IDAP 2024, Malatya, Turkey, 21 - 22 September 2024, (Full Text)

IV. **Disease Detection using Deep Learning Algorithms on the Hardware Platforms**
KARATAŞ BAYDOĞMUŞ G., Cicekli N. Z.
2023 Innovations in Intelligent Systems and Applications Conference, ASYU 2023, Sivas, Turkey, 11 - 13 October 2023, (Full Text)

V. **A Parallelization Based Ant Colony Optimization for Travelling Salesman Problem**
KARATAŞ BAYDOĞMUŞ G.
2022 1st International Conference on Information System & Information Technology (ICISIT), 27 July 2022, (Full Text)

VI. **Probability Selection for Solving Sudoku with Ant Colony optimization Algorithm**
KARATAŞ BAYDOĞMUŞ G.
2022 1st International Conference on Information System & Information Technology (ICISIT), 28 July 2022, (Full Text)

VII. **Covid-19 Disease Detection with Improved Deep Learning Algorithms on X-Ray Data**
Cicekli N. Z., KARATAŞ BAYDOĞMUŞ G.
2022 International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), Turkey, 10 June 2022, (Full Text)

VIII. **The Effect of Loss and Optimization Functions on Bitcoin Rate Prediction in LSTM**
Kirci B. K., KARATAŞ BAYDOĞMUŞ G.
2022 International Congress on Human-Computer Interaction, Optimization and Robotic Applications (HORA), Turkey, 10 June 2022, (Full Text)

IX. **Intrusion Detection Systems with GPU-AcceleratedDeep Neural Networks and Effect of the Depth**
REIS B., KAYA S. B., KARATAŞ G., ŞAHİNGÖZ Ö. K.
6th International Conference on Control Engineering Information Technology, 25 - 27 October 2018, (Full Text)

X. **A Deep Learning Based Intrusion Detection System on GPUs**
KARATAŞ G., DEMİR Ö., ŞAHİNGÖZ Ö. K.
InternationalConference on Electronics, Computers and Artificial Intelligence- ECAI 2019, 27 - 29 June 2019, (Full Text)

XI. **Intrusion Detection Systems with Deep Learning: A Systematic Mapping Study**

ÖSKEN S., YILDIRIM E. N., KARATAŞ G., CUHACI L.
2019 Scientific Meeting on Electrical-Electronics Biomedical Engineering and Computer Science (EBBT), 24 - 26 April 2019, (Full Text)

XII. **Deep Learning in Intrusion Detection Systems**
KARATAŞ G., DEMİR Ö., ŞAHİNGÖZ Ö. K.
International Congress on Big Data, Deep Learning and Fighting Cyber Terrorism, 3 - 04 December 2018, (Full Text)

XIII. **Neural Network Based Intrusion Detection Systems with Different Training Functions**
KARATAŞ G., ŞAHİNGÖZ Ö. K.
International Symposium on Digital Forensic and Security, 22 - 25 March 2018, (Full Text)

XIV. **Deep Learning in Intrusion Detection Systems**
Karatas G., DEMİR Ö., ŞAHİNGÖZ Ö. K.
International Congress on Big Data, Deep Learning and Fighting Cyber Terrorism (IBIGDELFT), Ankara, Turkey, 3 - 04 December 2018, pp.113-116, (Full Text)

XV. **Multi-tenant architectures in the cloud: A systematic mapping study**
KARATAŞ G., CAN F., DOĞAN G., KONCA C., AKBULUT A.
Artificial Intelligence and Data Processing Symposium (IDAP), 16 - 17 September 2017, (Full Text)

XVI. **A Systematic Mapping Study on Software Architecture Recovery**
ÇATAL Ç., AKBULUT A., KARATAŞ G., SEZER Z. A.
International Conference on Computer Science and Engineering, 20 October 2016, (Full Text)

XVII. **Genetik Algoritma ile Saldırı Tespit Sistemi - Genetic Algorithm For Intrusion Detection System**
KARATAŞ G.
Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Turkey, 16 - 19 May 2016, (Full Text)

XVIII. **Genetic Algorithm For Intrusion Detection System**
Karatas G.
24th Signal Processing and Communication Application Conference (SIU), Zonguldak, Turkey, 16 - 19 May 2016, pp.1341-1344, (Full Text)

XIX. **Yalın Yazılım Geliştirme Sistematik Eşleme Çalışması**
KARATAŞ G., ÇATAL Ç.
8. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS 'xx14), Turkey, 08 September 2014, (Full Text)

Funded Projects

Demir Ö., KARATAŞ BAYDOĞMUŞ G., Project Supported by Higher Education Institutions, BAP PhD, Derin Öğrenme Yaklaşımı ile Bir Saldırı Tespit Sistemi Uygulaması, 2018 - 2020

Metrics

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Citation (Scopus): 704
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H-Index (Scopus): 10