

## Asst. Prof. MEHMET GÖKHAN BAKAL

### Personal Information

**Email:** gokhan.bakal@agu.edu.tr

**Web:** <https://avesis.agu.edu.tr/gokhan.bakal>

### International Researcher IDs

ScholarID: RmUCPNwAAAAJ

ORCID: 0000-0003-2897-3894

ScopusID: 57074041500

Yoksis Researcher ID: 323710

### Education Information

Doctorate, University of Kentucky, College of Engineering, Computer Science, United States Of America 2014 - 2019

Postgraduate, University of Kentucky, College of Engineering, Computer Science, United States Of America 2012 - 2014

Undergraduate, Trakya University, Faculty Of Engineering And Architecture, Department Of Computer Engineering, Turkey 2005 - 2009

### Research Areas

bioinformatics, Knowledge Engineering, Computer Learning, Text/Document Processing

### Academic Titles / Tasks

Assistant Professor, Abdullah Gul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2022 - Continues

Lecturer PhD, Abdullah Gul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2020 - 2022

### Academic and Administrative Experience

Deputy Head of Department, Abdullah Gul University, Mühendislik Fakültesi, Bilgisayar Mühendisliği, 2023 - Continues

### Courses

Database Management Systems, Undergraduate, 2023 - 2024

Software Engineering, Undergraduate, 2023 - 2024

Text Mining, Doctorate, 2020 - 2021

Art of Computing, Undergraduate, 2020 - 2021

### Published journal articles indexed by SCI, SSCI, and AHCI

- Building a challenging medical dataset for comparative evaluation of classifier capabilities**  
Bozkurt B., Coskun K., Bakal G.

Computers in Biology and Medicine, vol.178, pp.1-8, 2024 (SCI-Expanded)

**II. Exploiting semantic patterns over biomedical knowledge graphs for predicting treatment and causative relations**

Bakal G., Talari P., Kakani E., Kavuluru R.

JOURNAL OF BIOMEDICAL INFORMATICS, vol.82, pp.189-199, 2018 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Machine Learning based Network Intrusion Detection with Hybrid Frequent Item Set Mining**  
Firat M., Bakal M. G., Akbaş A.  
Journal of Polytechnic, vol.1, no.1, pp.1, 2024 (ESCI)
- II. **An empirical study of sentiment analysis utilizing machine learning and deep learning algorithms**  
Erkantarci B., Bakal M. G.  
Journal of Computational Social Science, vol.6, pp.1-17, 2023 (ESCI)
- III. **Document Classification with Contextually Enriched Word Embeddings**  
Mahmood R. S., Bakal M. G., Akbaş A.  
Balkan Journal of Electrical and Computer Engineering, vol.12, no.1, pp.90-97, 2023 (Peer-Reviewed Journal)
- IV. **Non-Negative Matrix Factorization for Drug Repositioning: Experiments with the repoDB Dataset.**  
Bakal G., Kilicoglu H., Kavuluru R.  
AMIA ... Annual Symposium proceedings. AMIA Symposium, vol.2019, pp.238-247, 2020 (Peer-Reviewed Journal)
- V. **Predicting Treatment Relations with Semantic Patterns over Biomedical Knowledge Graphs.**  
Bakal G., Kavuluru R.  
Mining intelligence and knowledge exploration : third International Conference, MIKE 2015, Hyderabad, India, December 9-11, 2015. Proceedings. MIKE (Conference) (3rd : 2015 : Hyderabad, India), vol.9468, pp.586-596, 2015 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **A Sentiment Analysis Example Using Bert Model**  
Öztürk I., Bakal M. G.  
in: Classification Models in Data Mining and Applied Examples in R language, Ömer Faruk Rençber, Editor, Nobel Yayın Dağıtım, Ankara, pp.187-217, 2022
- II. **Classification Approach with Hybrid Modelling**  
Bakal M. G., Öztürk I.  
in: Classification Models in Data Mining and Applied Examples in R language, Ömer Faruk Rençber, Editor, Nobel Yayın Dağıtım, Ankara, pp.219-236, 2022
- III. **On Clustering Covid-19 Tweets with Text Mining Perspective**  
Bakal M. G., Abar H., Öztürk İ., Abar O., Abar O. (Editor)  
in: Text Mining Applications Using Real-World Data in Python, Orhan Abar, Editor, Nobel Yayınevi, Ankara, pp.1-22, 2021

## Refereed Congress / Symposium Publications in Proceedings

- I. **A Computational Drug Repositioning Effort using Patients' Reviews Dataset**  
Akkaya A., Bakal G.  
2023 International Conference on Smart Applications, Communications and Networking (SmartNets), İstanbul, Turkey, 25 - 27 July 2023, pp.1-6
- II. **A Transfer Learning Application on the Reliability of Psychological Drugs' Comments**

Şen T. Ü., Bakal G.

2023 International Conference on Smart Applications, Communications and Networking (SmartNets), İstanbul, Turkey, 25 - 27 July 2023, pp.1-6

**III. On Comparative Classification of Relevant Covid-19 Tweets**

Bakal M. G., Abar O.

2021 6th International Conference on Computer Science and Engineering (UBMK), Ankara, Turkey, 15 - 17 September 2021, pp.287-291

**IV. A Comparative Analysis on Medical Article Classification Using Text Mining & Machine Learning Algorithms**

Kolkusa B., Dedetürk B. K., Adanur Dedetürk B., Gülşen A., Bakal M. G.

2021 6th International Conference on Computer Science and Engineering (UBMK), Ankara, Turkey, 15 - 17 September 2021, pp.360-365

**V. Non-Negative Matrix Factorization for Drug Repositioning: Experiments with the repoDB Dataset.**

BAKAL M. G., kılıçoğlu h., kavuluru r.

AMIA ... Annual Symposium proceedings. AMIA Symposium, Washington, Kiribati, 16 - 20 November 2019, vol.2019, pp.238-247

**VI. On the Predictive Potential of Graph Patterns for Biomedical Relation Extraction**

BAKAL M. G., Wallace s., kavuluru r.

AMIA 2016 ANNUAL SYMPOSIUM, Chicago, IL, United States Of America, 12 - 16 November 2016

**VII. On Quantifying Diffusion of Health Information on Twitter**

Bakal G., Kavuluru R.

4th IEEE EMBS International Conference on Biomedical and Health Informatics (BHI), Florida, United States Of America, 16 - 19 February 2017, pp.485-488

## Supported Projects

Bakal M. G., Abar O., TUBITAK Project, Text Classification Using Complete Subgraphs Generated over N-grams, 2022 - 2024

## Scientific Consultations

ARGEVA INFORMATION TECHNOLOGIES INDUSTRY AND TRADE LIMITED COMPANY, Project Consultancy, Abdullah Gul University, Turkey, 2024 - 2025

## Tasks In Event Organizations

Bakal M. G., INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE & MACHINE LEARNING AI and ML Renaissance: Pioneering the Path to Future Intelligence, Scientific Congress, Osaka, Japan, Mayıs 2025

Bakal M. G., 4th Asia Conference on Algorithms, Computing and Machine Learning, Scientific Congress, Guangzhou, China, Mart 2025

Bakal M. G., 5th International Conference on Cloud, Big Data and IoT , Scientific Congress, Toronto, Canada, Eylül 2024

Bakal M. G., The 4'th International Conference on Intelligent Systems and Pattern Recognition, Scientific Congress, İstanbul, Turkey, Haziran 2024

## Metrics

Publication: 17

Citation (WoS): 28

Citation (Scopus): 48

H-Index (WoS): 2

H-Index (Scopus): 3

## **Awards**

Bakal M. G., AWS Cloud Credit for Research Application, Amazon Web Services, Inc., May 2024

Bakal M. G., Google Cloud Arařtırma Kredisi, Google Cloud Platform, January 2023

## **Non Academic Experience**

Business Establishment Private, DDI Technology, Software Development