

## Asst. Prof. İsmail AKGÜL

### Personal Information

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**Address:** 24000

### International Researcher IDs

ScholarID: F3IItnMAAAAJ

ORCID: 0000-0003-2689-8675

Publons / Web Of Science ResearcherID: JHU-5979-2023

ScopusID: 58098184400

Yoksis Researcher ID: 30566

### Education Information

Doctorate, Erzincan Binali Yildirim University, Sosyal Bilimler Enstitüsü, İşletme, Turkey 2014 - 2019

Postgraduate, Beykent University, Institute Of Social Sciences, İşletme, Turkey 2009 - 2011

Undergraduate, Firat University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 2000 - 2004

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, The mediating role of perceived organizational support in the effect of knowledge sharing on the employee creativity and innovative behavior: A research on information technology employees, Erzincan Binali Yildirim University, Sosyal Bilimler Enstitüsü, İşletme, 2019

### Research Areas

Artificial Intelligence, Computer Learning and Pattern Recognition, Neural Networks

### Academic Titles / Tasks

Assistant Professor, Erzincan Binali Yildirim University, Mühendislik-Mimarlık Fakültesi, Bilgisayar Mühendisliği Bölümü, 2020 - Continues

Lecturer, Erzincan Binali Yildirim University, Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölümü, 2008 - 2020

### Academic and Administrative Experience

Vice Dean, Erzincan Binali Yildirim University, Mühendislik-Mimarlık Fakültesi, 2023 - Continues  
Head of Department, Erzincan Binali Yildirim University, Mühendislik-Mimarlık Fakültesi, Bilgisayar Mühendisliği Bölümü, 2020 - Continues  
Deputy Head of Department, Erzincan Binali Yildirim University, Mühendislik-Mimarlık Fakültesi, Bilgisayar Mühendisliği Bölümü, 2020 - 2024  
Head of Department, Erzincan Binali Yildirim University, Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölümü, 2015 - 2020  
Assistant Manager of Research and Application Center, Erzincan Binali Yildirim University, Rektörlük, Uzaktan Eğitim Uygulama ve Araştırma Merkezi, 2011 - 2015

## Courses

Graduation Project 1, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Natural Language Processing, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Algorithm Analysis, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Visual Programming, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Object Oriented Programming, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020  
Graduation Project 2, Undergraduate, 2022 - 2023, 2021 - 2022  
Computer Engineering Design, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022  
Deep Learning, Postgraduate, 2022 - 2023, 2021 - 2022  
Mobile Programming, Undergraduate, 2021 - 2022, 2020 - 2021  
Web Programming, Undergraduate, 2021 - 2022, 2020 - 2021  
VERİTABANI-II (N.Ö.)(1.GRUP), Associate Degree, 2018 - 2019, 2016 - 2017  
MOBİL PROGRAMLAMA (N.Ö.), Associate Degree, 2018 - 2019, 2016 - 2017  
NESNE TABANLI PROGRAMLAMA-I (N.Ö.)(1.GRUP), Associate Degree, 2018 - 2019, 2016 - 2017  
OFİS PROGRAMLARI (BÜRO), Associate Degree, 2018 - 2019  
Bilgisayar II (Beden Eğitimi), Undergraduate, 2018 - 2019  
VERİTABANI 2 (İ.Ö.), Associate Degree, 2017 - 2018  
KLAVYE KULLANIMI, Associate Degree, 2018 - 2019  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ (MODA), Associate Degree, 2018 - 2019  
YÖNETİM BİLİŞİM SİSTEMLERİ, Associate Degree, 2018 - 2019, 2017 - 2018  
VERİTABANI-I (N.Ö.), Associate Degree, 2018 - 2019, 2017 - 2018  
YÖNETİM BİLİŞİM SİSTEMLERİ (BÜRO), Associate Degree, 2018 - 2019  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ (BÜRO), Associate Degree, 2018 - 2019  
NESNE TABANLI PROGRAMLAMA 1 (N.Ö.), Associate Degree, 2017 - 2018  
NESNE TABANLI PROGRAMLAMA 1 (İ.Ö.), Associate Degree, 2017 - 2018  
NESNE TABANLI PROGRAMLAMA-II (N.Ö.), Associate Degree, 2018 - 2019, 2017 - 2018  
OFİS PROGRAMLARI, Associate Degree, 2017 - 2018  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ (İNŞAAT), Associate Degree, 2018 - 2019  
MOBİL PROGRAMLAMA (N.Ö + İ.Ö), Associate Degree, 2017 - 2018  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ (LOJİSTİK), Associate Degree, 2018 - 2019  
VERİTABANI 2 (N.Ö), Associate Degree, 2017 - 2018  
YÖNETİM BİLİŞİM SİSTEMLERİ, Associate Degree, 2017 - 2018  
NESNE TABANLI PROGRAMLAMA-I (İ.Ö.), Associate Degree, 2016 - 2017  
VERİTABANI-II (N.Ö.)(2.GRUP), Associate Degree, 2016 - 2017  
VERİTABANI-II (İ.Ö.), Associate Degree, 2016 - 2017  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ , Associate Degree, 2017 - 2018  
VERİTABANI-I (İ.Ö.), Associate Degree, 2017 - 2018  
MOBİL PROGRAMLAMA (İ.Ö.), Associate Degree, 2016 - 2017  
NESNE TABANLI PROGRAMLAMA-I (N.Ö.)(2.GRUP), Associate Degree, 2016 - 2017

BİLGİ VE İLETİŞİM TEKNOLOJİSİ, Associate Degree, 2017 - 2018  
NESNE TABANLI PROGRAMLAMA-II (İ.Ö.), Associate Degree, 2017 - 2018  
BİLGİ VE İLETİŞİM TEKNOLOJİSİ , Associate Degree, 2017 - 2018  
MOBİL PROGRAMLAMA, Associate Degree, 2014 - 2015  
VERİTABANI-I, Associate Degree, 2014 - 2015  
NESNE TABANLI PROGRAMLAMA-II, Associate Degree, 2014 - 2015  
VERİTABANI-II, Associate Degree, 2014 - 2015  
YÖNETİM BİLİŞİM SİSTEMLERİ, Associate Degree, 2014 - 2015  
NESNE TABANLI PROGRAMLAMA-I, Associate Degree, 2014 - 2015

## Advising Theses

Akgül İ., Enhancement of speech signals using artificial intelligence models, Postgraduate, A.Gündüz(Student), Continues  
Akgül İ., Detection and classification of diseases seen on grape leaf with deep learning, Postgraduate, U.Fırat(Student), Continues  
Akgül İ., Detection of personal equipment used in occupational safety with artificial intelligence based image processing techniques, Postgraduate, M.Ertuğrul(Student), Continues  
Akgül İ., Detecting terror threat elements by natural language processing, Postgraduate, A.Güler(Student), 2023

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

- I. **A Pooling Method Developed for Use in Convolutional Neural Networks**  
Akgül İ.  
CMES - COMPUTER MODELING IN ENGINEERING AND SCIENCES, vol.141, no.1, pp.751-770, 2024 (SCI-Expanded)
- II. **A Novel Artificial Intelligence-Based Hybrid System to Improve Breast Cancer Detection Using DCE-MRI**  
Akgül İ., Kaya V., Karavaş E., Aydın S., Baran A.  
BULLETIN OF THE POLISH ACADEMY OF SCIENCES. TECHNICAL SCIENCES, vol.72, no. 3, pp.1-11, 2024 (SCI-Expanded)
- III. **Covid-19 detection on x-ray images using a deep learning architecture**  
Akgül İ., Kaya V., Ünver E., Karavaş E., Baran A., Tuncer S.  
JOURNAL OF ENGINEERING RESEARCH, vol.11, no.2B, pp.15-26, 2023 (SCI-Expanded)
- IV. **Mobile-DenseNet: Detection of building concrete surface cracks using a new fusion technique based on deep learning**  
Akgül İ.  
HELIYON, vol.9, no.10, pp.1-11, 2023 (SCI-Expanded)
- V. **A Novel Hybrid Model Based on Machine and Deep Learning Techniques for the Classification of Microalgae**  
Kaya V., Akgül İ., Tanır Ö. Z.  
Phyton-International Journal of Experimental Botany, vol.92, no.9, pp.2519-2534, 2023 (SCI-Expanded)
- VI. **A novel hybrid system for automatic detection of fish quality from eye and gill color characteristics using transfer learning technique.**  
Akgül İ., Kaya V., Zencir Tanır Ö.  
PloS one, vol.18, no.4, 2023 (SCI-Expanded)
- VII. **IsVoNet8: A Proposed Deep Learning Model for Classification of Some Fish Species**  
Kaya V., Akgül İ., Zencir Tanır Ö.  
TARIM BİLİMLERİ DERGİSİ, vol.29, no.1, pp.298-307, 2023 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Deep convolutional neural networks for age and gender estimation using an imbalanced dataset of human face images**  
Akgül İ.  
NEURAL COMPUTING AND APPLICATIONS, 2024 (Scopus)
- II. **Detecting terror threat elements using natural language processing**  
Güler A., Akgül İ.  
Journal of Scientific Reports-B, no.010, pp.1-12, 2024 (Peer-Reviewed Journal)
- III. **Deep Learning Based Models for Detection of Diabetic Retinopathy**  
Akgül İ., Yavuz Ö. Ç., Yavuz U.  
TEHNICKI GLASNIK-TECHNICAL JOURNAL, vol.17, no.4, pp.581-587, 2023 (ESCI)
- IV. **A Novel Deep Learning Method for Detecting Defects in Mobile Phone Screen Surface Based on Machine Vision**  
Akgül İ.  
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.27, no.2, pp.442-451, 2023 (Peer-Reviewed Journal)
- V. **Classification of skin cancer using VGGNet model structures**  
Kaya V., Akgül İ.  
Gümüşhane Üniversitesi Fen Bilimleri Dergisi, vol.13, no.1, pp.190-198, 2023 (Peer-Reviewed Journal)
- VI. **Detection of Defects in Printed Circuit Boards with Machine Learning and Deep Learning Algorithms**  
Kaya V., Akgül İ.  
Avrupa Bilim ve Teknoloji Dergisi, no.41, pp.183-186, 2022 (Peer-Reviewed Journal)
- VII. **OBJECT RECOGNITION WITH DEEP LEARNING AND MACHINE LEARNING METHODS**  
Akgül İ., Aydın Y.  
Technological Applied Sciences, vol.17, no.4, pp.54-61, 2022 (Peer-Reviewed Journal)
- VIII. **REALIZATION OF A YOLO-V3-BASED APPLICATION FOR THE DETECTION OF TICK-BORNE CASES**  
Akgül İ., Kaya V.  
Engineering Sciences, vol.17, no.3, pp.35-41, 2022 (Peer-Reviewed Journal)
- IX. **Emotion Recognition from Facial Expressions by Deep Learning Model**  
Akar F., Akgül İ.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.12, no.1, pp.69-79, 2022 (Peer-Reviewed Journal)
- X. **CLASSIFICATION of CELLS INFECTED with the MALARIA PARASITE with RESNET ARCHITECTURES**  
Akgül İ., Kaya V.  
Journal of scientific reports-A (Online), no.048, pp.42-54, 2022 (Peer-Reviewed Journal)
- XI. **The Mediating Role of Perceived Organizational Support on the Relationship between Tacit Knowledge Sharing and Employee Creativity**  
Akgül İ., Yavuz U.  
JOURNAL OF GRADUATE SCHOOL OF SOCIAL SCIENCES, vol.25, no.1, pp.193-213, 2021 (Peer-Reviewed Journal)
- XII. **INVESTIGATION OF IT EMPLOYEES' INNOVATIVE BEHAVIORS IN TERMS OF DEMOGRAPHIC CHARACTERISTICS**  
Akgül İ., Yavuz U.  
Erzincan Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, vol.12, no.1, pp.54-72, 2019 (Peer-Reviewed Journal)
- XIII. **The Mediating Effect of Job Satisfaction on the Relationship Between Leadership Styles and Organizational Commitment: A Study of Academicians**  
Yücel İ., Akgül İ.  
Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi, vol.17, no.1, pp.209-226, 2016 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **ACTIVATION FUNCTIONS USED IN ARTIFICIAL NEURAL NETWORKS**

Akgül İ.

in: Academic Studies in Engineering, Prof. Dr. Çoşkun ÖZALP, Editor, Gece Kitaplığı, Ankara, pp.41-58, 2023

**II. OBJECT DETECTION WITH ARTIFICIAL INTELLIGENCE: YOLO APPLICATION**

Kaya V., Akgül İ.

in: Interdisciplinary Engineering Sciences Concepts, Researches and Applications, Prof. Dr. Serkan Islak, Editor, Livre de Lyon, Lyon, pp.109-126, 2022

**III. Learning Performance of Optimization Algorithms in Convolutional Neural Networks: An Application**

Akgül İ., Kaya V.

in: INSAC Scientific Researches in Natural and Engineering Sciences, Doç.Dr. Sadık Alper Yıldızıl,Doç. Dr. Selmin Ener Ruşen, Editor, Duvar Yayınları, Ankara, pp.215-236, 2022

## Refereed Congress / Symposium Publications in Proceedings

**I. The Effect on Model Performance of Increasing the Batch Size during Training**

Akgül İ.

4th Global Conference on Engineering Research (GLOBECER'24), Balıkesir, Turkey, 16 - 19 October 2024, pp.14-20

**II. A REVIEW ON THE SCIENCE OF NATURAL LANGUAGE PROCESSING**

Güler A., Akgül İ.

3rd INTERNATIONAL AZERBAIJAN CONGRESS ON LIFE, ENGINEERING, AND APPLIED SCIENCES, Baku, Azerbaijan, 26 - 28 November 2022, pp.126-133

**III. Classification of Electronic Circuit Elements by Machine Learning Based Methods**

Kaya V., Akgül İ.

6th INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL & APPLIED SCIENCE, Ağrı, Turkey, 11 - 13 October 2022, pp.136-140

**IV. Recognition and Classification of Vegetable Types in Agricultural Areas Using the Mobilenet Model Structure**

Kaya V., Akgül İ.

1st International Computer Science, Engineering and Information Technology Congress (ICSITY 2022), Warszawa, Poland, 29 - 30 September 2022, pp.63-70

**V. DETECTION BASED ON TRANSFER LEARNING APPROACH FOR PREVENTION AND EARLY DETECTION OF PEACH PLANT DISEASE FROM LEAF IMAGES**

Akgül İ., Kaya V.

USBILIM 2nd International Conference on Artificial Intelligence Studies, Ankara, Turkey, 17 - 18 September 2022, pp.99-104

**VI. A REVIEW ON ARTIFICIAL NEURAL NETWORKS**

Akgül İ., Kaya V.

Rumeli 1ST International Scientific Research Conference On Sustainable Engineering And Technology (ISRCSET'22), İstanbul, Turkey, 13 - 15 May 2022, pp.136-145

**VII. DETECTION OF POTHOLE ON HIGHWAY USING DEEP LEARNING**

Kaya V., Akgül İ.

7th INTERNATIONAL CONGRESS ON ENGINEERING AND TECHNOLOGY MANAGEMENT, İstanbul, Turkey, 16 - 18 April 2022, pp.361-367

**VIII. Examination of Facial Mask Detection Using Deep Learning Methods Against Coronavirus**

Akgül İ., Kaya V., Baran A.

4. Uluslararası İpek Yolu Akademik Çalışmalar Sempozyumu, Nevşehir, Turkey, 17 - 18 December 2020, pp.149-154

## Supported Projects

Akgül İ., Project Supported by Higher Education Institutions, Evrişimli sinir ağı modellerinin eğitimi sırasında parti boyutunun artırılmasının model performansı üzerindeki etkisi, 2024 - 2025  
Doğankaya L., Akgül İ., Kaya V., TUBITAK Project, Yapay Zeka Destekli Larva Sayım Cihazı, 2023 - 2024

## Scientific Refereeing

Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, August 2024  
Journal of Scientific Reports-C, Other Indexed Journal, January 2024  
EXPERT SYSTEMS WITH APPLICATIONS, Journal Indexed in SCI-E, August 2023  
Journal of Scientific Reports-B, Other Indexed Journal, June 2023  
JOURNAL OF ENGINEERING RESEARCH, Journal Indexed in SCI-E, June 2023  
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, Journal Indexed in SCI-E, June 2023  
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, Journal Indexed in SCI-E, May 2023  
Artificial Intelligence Studies, Other Indexed Journal, May 2023  
PLOS ONE, Journal Indexed in SCI-E, November 2022  
Journal of scientific reports-A (Online), Other Indexed Journal, May 2022  
Eskişehir Türk Dünyası Uygulama ve Araştırma Merkezi Bilişim Dergisi, Other Indexed Journal, May 2022  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, December 2021  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, Other Indexed Journal, October 2021  
ACADEMIC PLATFORM-JOURNAL OF ENGINEERING AND SCIENCE, Other Indexed Journal, October 2021  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, September 2021  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, August 2021  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, January 2021  
Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Other Indexed Journal, July 2020

## Metrics

Publication: 31  
Citation (WoS): 16  
Citation (Scopus): 20  
H-Index (WoS): 3  
H-Index (Scopus): 3

## Non Academic Experience

MNG Kargo  
4T Bilişim Sistemleri  
Tristit Group