

# GÜNET EROĞLU

ASSISTANT PROFESSOR



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## Education

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|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Doctoral<br>2015<br>22/Temmuz/2020             | SABANCI UNIVERSITY->INSTITUTE OF SCIENCE->COMPUTER SCIENCES AND ENGINEERING (PhD) (ENGLISH)<br>Thesis name: Improving reading abilities in dyslexia with neurofeedback and multi-sensory learning (2020) Thesis Advisor:(Müjdat Çetin; Selim Balcısoy) |
| Master (Non-thesis)<br>2001<br>24/Haziran/2002 | ISTANBUL TECHNICAL UNIVERSITY->INSTITUTE OF SOCIAL SCIENCES->BUSINESS ADMINISTRATION (MASTER) (WITHOUT THESIS) (ENGLISH) (EVENING EDUCATION)                                                                                                           |
| Bachelor's Degree<br>1983<br>1/Temmuz/1988     | BOGAZICI UNIVERSITY->FACULTY OF ENGINEERING->DEPARTMENT OF COMPUTER ENGINEERING->COMPUTER ENGINEERING PR. (ENGLISH)                                                                                                                                    |

## Academic Title

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|----------------------------------------------|------------------------------------------------------------------------------------------------------------|
| ASSISTANT PROFESSOR<br>01.10.2022            | BAHCESEHIR UNIVERSITY/MÜHENDİSLİK FAKÜLTESİ/BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ                                 |
| ASSISTANT PROFESSOR<br>01.10.2020-01.10.2022 | ISIK UNIVERSITY/MÜHENDİSLİK FAKÜLTESİ/BİLGİSAYAR MÜHENDİSLİĞİ BÖLÜMÜ/BİLGİSAYAR MÜHENDİSLİĞİ ANABİLİM DALI |

## Supervised Theses:

### Yüksek Lisans

2024

1. KHUDHUR AHMED YASEEN, (2024). Daily close price estimation for Exxonmobil and British Petroleum Corporations using machine learning and deep learning models: A pilot study, Bahçeşehir Üniversitesi->Lisansüstü Eğitim Enstitüsü->Büyük Veri ve Veri Analitiği Ana Bilim Dalı (Tamamlandı)
2. ALGHWIL ESRA MOHAMED OSAMA A., (2024). Hear failure prediction using machine-learning methods, Bahçeşehir Üniversitesi->Lisansüstü Eğitim Enstitüsü->Büyük Veri Analitiği ve Yönetimi Ana Bilim Dalı (Tamamlandı)
3. BANDAY NAVREEN HAMID, (2024). Applying machine learning methods to EEG collected from dyslexia and healthy children, Bahçeşehir Üniversitesi->Lisansüstü Eğitim Enstitüsü->Bilgisayar Mühendisliği Ana

2023

4. ASLAN ARDA, (2023). Detailed analysis of ML algorithms in project management applications, Bahçeşehir Üniversitesi->Lisansüstü Eğitim Enstitüsü->Bilgisayar Mühendisliği Ana Bilim Dalı (Tamamlandı)

### Positions in Projects:

1. AUTOTRAINBRAIN, TUBITAK Project, Yürütücü:GÜNET EROĞLU, , 23/08/2017 - 23/03/2019 (NATIONAL)
2. Disleksili Kişilerin Okuma Becerilerinin Göz Hareketleri, İnsan Sesi, Okuma Kalitesi Ve Odaklanma Gücü Üzerinden Verilen Nöro Geribildirim Ile Geliştirilmesi, TUBITAK Project (3501), Yürütücü:GÜNET EROĞLU, Danışman:CANAN KOCAMAN, , 01/06/2022 (In Progress) (NATIONAL)
3. OTİZMLİ ÇOCUKLARIN BİLİŞSEL PERFORMANSLARININ BİR CEP TELEFONU UYGULAMASI VE BAŞLIĞI İLE ARTIRILMASI, TUBITAK Project, Yürütücü:GÜNET EROĞLU, , 01/07/2020 - 31/07/2021 (NATIONAL)

### Courses \*

Öğrenim Dili Course Hour Semester

2024-2025

#### Bachelor's Degree Programme

|                                                   |         |   |       |
|---------------------------------------------------|---------|---|-------|
| CMP2004 Advanced Programming                      | English | 9 | Bahar |
| SEN2022- Software Engineering Analysis and Design | English | 9 | Güz   |

#### Doctorate Programme

|                                |         |   |     |
|--------------------------------|---------|---|-----|
| CMP6138 Analysis of algorithms | English | 3 | Güz |
|--------------------------------|---------|---|-----|

2023-2024

#### Bachelor's Degree Programme

|                                 |         |   |       |
|---------------------------------|---------|---|-------|
| CMP2004- Advanced Programming   | English | 9 | Bahar |
| CMP3005- Analysis of Algorithms | English | 9 | Güz   |

### Patents

1. **PCT/TR2017/050572** (2021)  
Applicants : gunet eroglu,mujdat cetin,selim balcisor, Patentee : gunet eroglu,mujdat cetin,selim balcisor

### Works

#### Articles published in international refereed journals:

1. EROĞLU GÜNET,ABOU HARB MHD RAJA (2026). Theta and Beta1 Frequency Band Values Predict Dyslexia Classification. dyslexia, Doi: 10.1002/dys.70021 (Publication No: 9953294)
2. EROĞLU GÜNET (2025). Enhancing Left Hemisphere Function in Dyslexia: A Pilot Study on 14-Channel Neurofeedback With Auto-Train Brain. NeuroRegulation, Doi: 10.15540/nr.12.4.235 (Publication No: 9899231)
3. EROĞLU GÜNET,ABOU HARB MHD RAJA (2025). "Can we use a biomarker detection algorithm to measure the effectiveness of 14-channel neurofeedback in dyslexia?". Applied Neuropsychology: Child, Doi: 10.1080/21622965.2025.2545272 (Publication No: 9734793)
4. EROĞLU GÜNET (2025). Electroencephalography-Based Machine Learning for Biomarker Detection in Dyslexia and Autism Spectrum Disorder: A Comparative Review of Models, Features, and Diagnostic Utility. Diagnostics, 15, Doi: 10.3390/diagnostics15182388 (Publication No: 9711825)
5. EROĞLU GÜNET,ABOU HARB MHD RAJA (2025). Electroencephalography Signatures Associated with Developmental Dyslexia Identified Using Principal Component Analysis. Diagnostics, 15, Doi: 10.3390/diagnostics15172168 (Publication No: 9682580)
6. EROĞLU GÜNET (2025). Electroencephalography-Based Neuroinflammation Diagnosis and Its Role in Learning Disabilities. Diagnostics, Doi: 10.3390/diagnostics15060764 (Publication No: 9516296)

## Articles published in international refereed journals:

7. EROĞLU GÜNET, ARMAN FEHİM (2022). k-Means clustering by using the calculated Z-scores from QEEG data of children with dyslexia. *Applied Neuropsychology-Child*, 0(1), 1-7., Doi: 10.1080/21622965.2022.2074298 (Publication No: 7686462)
8. EROĞLU GÜNET, TEBER SERAP, Ertürk Kardelen, Kırmızı Meltem, EKİCİ BARIŞ, ARMAN FEHİM, Balcısoy Selim, Özcan Yusuf Ziya, ÇETİN MÜJDAT (2021). A mobile app that uses neurofeedback and multi-sensory learning methods improves reading abilities in dyslexia: A pilot study. *Applied Neuropsychology-Child*, Doi: 10.1080/21622965.2021.1908897 (Publication No: 7110398)
9. EROĞLU GÜNET, GÜRKAN MERT, TEBER SERAP, Ertürk Kardelen, Kırmızı Meltem, EKİCİ BARIŞ, ARMAN FEHİM, Balcısoy Selim, Özgöz Volkan, ÇETİN MÜJDAT (2020). Changes in EEG complexity with neurofeedback and multi-sensory learning in children with dyslexia: A multiscale entropy analysis. *Applied Neuropsychology-Child*, 11, Doi: 10.1080/21622965.2020.1772794 (Publication No: 6998344)

## B. Papers presented at international scientific meetings and published in proceedings :

1. EROĞLU GÜNET, ÇETİN MÜJDAT, Balcısoy Selim (2018). Electroencephalographic identifiers of reading abilities in turkish language. *SIU2018*, Doi: 10.1109/SIU.2018.8404701 (Full Text Publication/Oral Presentation) (Publication No: 7705100)
2. EROĞLU GÜNET, ÇETİN MÜJDAT, ARMAN FEHİM, Balcısoy Selim, EKİCİ BARIŞ, GÜRKAN MERT (2018). Can we predict who will respond more to neurofeedback with resting state EEG?. *TIPTEKNO2018*, Doi: 10.1109/TIPTEKNO.2018.8596857 (Full Text Publication/Oral Presentation) (Publication No: 7705104)
3. EROĞLU GÜNET (2022). A mobile app that uses neurofeedback and multi-sensory learning methods improves reading abilities in dyslexia: A pilot study. *Global Webinar on Public Health , Neurology & Mental Disorders (Abstract/Guest Speaker)* (Publication No: 7733443)
4. EROĞLU GÜNET (2022). SIMPLE ARROW-BASED REWARDING NEUROFEEDBACK INTERFACE REDUCES THETA BRAINWAVES MORE THAN ?YOUTUBE?-BASED REWARDING NEUROFEEDBACK INTERFACE: A PILOT STUDY. *V. INTERNATIONAL "BAŞKENT" CONGRESS ON PHYSICAL, SOCIAL AND HEALTH SCIENCES* (Full Text Publication/Oral Presentation) (Publication No: 7733440)
5. EROĞLU GÜNET (2022). Auto Train Brain improves fast brain waves in comorbid learning disabilities with atypical autism: A pilot study. *ASES INTERNATIONAL SCIENTIFIC RESEARCH CONFERENCE (Abstract/Oral Presentation)* (Publication No: 7733439)
6. EROĞLU GÜNET (2022). Auto Train Brain increases the variance of the gamma band sample entropy in the left hemisphere in dyslexia: A pilot study. *WORLD S4 2022* (Full Text Publication/Oral Presentation) (Publication No: 7773551)
7. EROĞLU GÜNET (2022). Comparison of the efficacy of multi-modal neurofeedback from 5 and 14-channel EEG headset: A pilot study. *9. Uluslararası İstanbul Bilimsel Araştırmalar Kongresi 2022* (Full Text Publication/Oral Presentation) (Publication No: 7773551)
8. EROĞLU GÜNET (2022). A pilot study found that visually and vocally rewarding neurofeedback improves sample entropy in dyslexia more than vocally rewarding neurofeedback. *TıpTekno 2022* (Full Text Publication/Oral Presentation) (Publication No: 7919215)
9. GÖKSU BEŞKAYA ZEYNEP, GÜRKAYNAK NİLGÜN, EROĞLU GÜNET (2024). Case Study: Auto Train Brain Finding New Markets for an EEG-Aided Learning Software. *TIPTEKNO2024 (Abstract/Poster)* (Publication No: 9128161)
10. KARABİBER CURA ÖZLEM, Yaşar Çıklaçandır Fatma Günseli, EROĞLU GÜNET (2024). Diagnosis of Dyslexia using 2D EEG Feature map and Convolutional Neural Network. *TIPTEKNO2024* (Full Text Publication/Oral Presentation) (Publication No: 9128176)
11. EROĞLU GÜNET, GÖKSU BEŞKAYA ZEYNEP, GÜRKAYNAK NİLGÜN, ÖZER TORGALÖZ ALEV, YENER GÖRSEV (2024). Case Study: Auto Train Brain , a User friendly Learning Tool with EEG Assistance. *2024 International PharmacoEEG (IPEG) Conference in Izmir, Turkey* (Full Text Publication/Oral Presentation) (Publication No: 9673648)
12. EROĞLU GÜNET (2025). Early EEG Biomarkers of Dyslexia: An AI-Driven Discovery from First-Session Recordings. *ICCSDT 2025* (Full Text Publication/Oral Presentation) (Publication No: 9673640)
13. EROĞLU GÜNET, ABOU HARB MHD RAJA (2025). Secure and Interpretable Dyslexia Detection Using Homomorphic Encryption and SHAP-Based Explanations. *TIPTEKNO2025* (Full Text Publication/Oral Presentation) (Publication No: 9833749)

14. EROĞLU GÜNET (2025). Disrupted Neuroimmune Pathways in Cognitive Development: Insights from EEG-Based AI Detection of Synaptic and Lymphatic Dysfunctions. International Conference on Cancer Science, Diagnosis and Therapeutics (Abstract/Guest Speaker) (Publication No: 9899252)
15. KARABİBER CURA ÖZLEM,ÇIKLAÇANDIR FATMA GÜNSELİ,ÇIKLAÇANDIR SAMET,EROĞLU GÜNET (2024). Detection of Dyslexia Using EEG Signal Decompositional technique: Variational mode decomposition and derivatives. TIPTEKNO2024 (Full Text Publication/Oral Presentation) (Publication No: 9128183)
16. EROĞLU GÜNET,ABOU HARB MHD RAJA (2023). Assessing Dyslexia with Machine Learning: A Pilot Study Utilizing Google ML Kit . TIPTEKNO2023 (Full Text Publication/Oral Presentation) (Publication No: 8637638)
17. EROĞLU GÜNET (2022). Auto Train Brain increases cognitive abilities in a boy with dyslexia and atypical autism: A case study . X. INTERNATIONAL ISTANBUL SCIENTIFIC RESEARCH CONGRESS (Full Text Publication/Oral Presentation) (Publication No: 7741559)

## C. Authored national/international books or chapters in books:

### C1. Authored national/international books:

1. Beynin ve Yapay Zekanın Yarattığı Fonksiyonel Bağlantısallık ve Enformasyon (2023)., EROĞLU GÜNET, Ekin Yayınevi, Edition No:1, Pages 99, ISBN:978-625-6952-57-7, Turkish (Scientific Book) (Publication No: 8311934)
2. Beyin bilimine popüler bakış (2021)., EROĞLU GÜNET, İkinciAdam, Edition No:1, Pages 250, ISBN:978-625-7583-64-0, Turkish (Scientific Book) (Publication No: 7686470)

## C. Authored national/international books or chapters in books:

### C2. Chapters written in national/international books:

1. Dijital Psikiyatri, Chapter name:(Gelisimsel disleksi ve otizm spektrum bozukluğu tedavisinde özgün bir nörogeribildirim yöntemi: Auto Train Brain) (2022)., EROĞLU GÜNET, Savaş Dilara, EKİCİ BARIŞ, Türkiye Klinikleri, Editor:Bildik, Tezan, Edition no:1, Pages 146, ISBN:978-625-401-648-6, Turkish (Scientific Book) (Publication No: 8311923)

## D. Articles published in national refereed journals :

1. EROĞLU GÜNET (2024). Measuring the gamma band entropy variance is a novel method to compare the efficacy of neurofeedback in the left temporal region and in the right temporal region for dyslexia: Pilot study. Acibadem Universitesi Saglik Bilimleri Dergisi, Doi: 10.31067/acusaglik.1281312 (Control No: 9074755)
2. EROĞLU GÜNET (2023). A comparison of Auto Train Brain neurofeedback rewarding interfaces in terms of efficacy. Acibadem Universitesi Saglik Bilimleri Dergisi, 14, Doi: 10.31067/acusaglik.1136359 (Control No: 8311881)
3. EROĞLU GÜNET (2019). Home Based Neurofeedback and GFCF Diet for Improving Developmental Brain Conditions. Dergipark-Journal of Medical Innovation and Technology (Control No: 7705106)

## E. Papers presented at national scientific meetings and published in

1. EROĞLU GÜNET, ÇETİN MÜJDAT, Balcısoy Selim, AYDIN SERAP (2018). Improving cognitive functions of dyslexies using multi-sensory learning and EEG neurofeedback. SIU2018, Doi: 10.1109/SIU.2018.8404711 (Full Text Publication/Oral Presentation) (Publication No: 7705097)

## Technical Notes, Case Reports, Research Notes, etc.

1. Case Report, EROĞLU GÜNET, EKİCİ BARIŞ (2020). Neurofeedback improves EEG complexity and social interaction in a boy with autism: A case report. J Surg Med.(2), 161-163., Doi: 10.28982/josam.638667 (Publication No: 7691391)

## Non-academic Experience

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25.08.2024 **Tepe Yönetici-İcra Kurulu Başkanı (Ceo)** AI Software Solutions Inc., (Commercial (Private))

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01.05.2024 **Tepe Yönetici-İcra Kurulu Başkanı (Ceo)** Auto Train Brain Inc., (Commercial (Private))

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23.08.2017 **CEO**

HMS A.Ş., Auto Train Brain, disleksi konusundaki araştırma geliştirme merkezi., (Commercial (Private))