### Lect. PhD ASLI BOYRAZ

### **Personal Information**

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Web: https://ayazagan.com

#### International Researcher IDs

ScholarID: yG6sVqcAAAAJ ORCID: 0000-0001-9431-2221

Publons / Web Of Science ResearcherID: JPA-0258-2023

Yoksis Researcher ID: 121205

### **Biography**

After I finished my Bachelor degree in Mathematics, I wanted to do applied science and I had masters in Informatics in the US. I worked with unstructured text data in my MS thesis and data mining techniques were explored. After I got back home, I have started to work as Instructor in Computer Programming Department in RTE University. Just teaching did not satisfy me, I decided medical area is the best for humanity to use my math and programming background and I chose to do a PhD in Medical Informatics. During my PhD education, I focused on to be a data scientist and I took data science related courses such as data mining and machine learning from computer engineering department.

For my PhD project, I started to work on microbiome bioinformatics. To focus my research, I visited Science for Life Laboratory at Karolinska Institute in Stockholm, Sweden with a government scholarship for six months. During my research, I had experience working with R and I explored bioinformatics pipelines. At the beginning of my PhD project, I was involved in a forensic research to solve hospital infection problem. I worked on analyzing a contagion dataset obtained in an intense care unit in order to find the contagion path among objects utilizing microbiome profiles of objects. During my effort of analyzing contagion dataset, I figured out microbiome data should be considered as "compositional data" and I took a course about Compositional Data Analysis from the founders of the Compositional Data Research Group in Spain. Then, we developed a new procedure to analyze microbiome data using compositional data techniques that has a well-founded mathematical background. We proposed a new clustering approach of microbiome data opposed to taxonomic clusters of OTUs/ASVs. This new approach could open new insights in the analysis of microbiome datasets.

#### **Education Information**

Doctorate, Middle East Technical University, Graduate School Of Informatics, Medical Informatics, Turkey 2012 - 2022 Postgraduate, University of Pittsburgh, Information Science And Technology, Data Science, United States Of America 2008 - 2010

Undergraduate, Hacettepe University, Fen Fakültesi, Matematik, Turkey 2002 - 2006

### Foreign Languages

English, C2 Mastery

# Certificates, Courses and Trainings

Data Analysis, Compositional Data Analysis, University of Girona, 2018

Data Analysis, Açık Veri ve Veri Okuryazarlığı Sertifikası, Açık Veri Derneği, 2016

Personal Evolution, Gençler Var!, Akdeniz University, 2013

Data Analysis, Mikroarray Eğitimi ve Veri Analizi Kursu, Orta Doğu Teknik Üniversitesi, 2013

Data Analysis, Biological Databases and Analysis Tools, the Instituto Gulbenkian de Ciência, 2012

#### **Dissertations**

Doctorate, MICROBIOME DATA ANALYSIS USING COMPOSITIONAL DATA APPROACH, Middle East Technical University, Graduate School Of Informatics, Medical Informatics, 2022

Postgraduate, Potential of Bookmark Based User Profiles, University of Pittsburgh, The School of Computing and Information, Veri Bilimi, 2010

#### Research Areas

Computer Sciences, bioinformatics, Artificial Intelligence, Computer Learning and Pattern Recognition, Knowledge Engineering, Health Sciences, Biostatistics and Medical Informatics

# **Academic Titles / Tasks**

Lecturer, Recep Tayyip Erdogan University, Teknik Bilimler Meslek Yüksekokulu, Bilgisayar Teknolojileri Bölüm, 2010 -Continues

### Courses

İleri Nesne Tabanlı Programlama, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013

Veritabanı, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

İleri Veri Tabanı, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012

Nesne Tabanlı Programlama, Associate Degree, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

Girişimcilik, Associate Degree, 2021 - 2022

Temel Elektronik, Associate Degree, 2021 - 2022

Yönetim Bilişim Sistemleri, Undergraduate, 2017 - 2018

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

 I. Principal microbial groups: compositional alternative to phylogenetic grouping of microbiome data Boyraz A., Pawlowsky-Glahn V., Jose Egozcue J., ACAR A. C.
 BRIEFINGS IN BIOINFORMATICS, vol.23, no.5, 2022 (SCI-Expanded)

# Articles Published in Other Journals

I. Developing Questionnaires as a Tool of Collecting Information for Program Evaluation in Medical Education

TURHAN K., KURT B., BOYRAZ A., TOPRAK U., ÜNSAL S.

Journal of Medical Education and Informatics, vol.3, no.2, pp.10-19, 2017 (Peer-Reviewed Journal)

# Refereed Congress / Symposium Publications in Proceedings

I. Collective, Collaborative and Personalized Mobile Health Recommender: HealthUp Boyraz A.

14. Tıp Bilişimi Kongresi, İzmir, Turkey, 16 - 18 March 2023, pp.256-262

II. Öğretimsel Bir Araç Olarak Robotlar: Eğitim Uygulamalarında Robotların Kullanımı

Boyraz A., Keskinkılıç F.

11.th International Computer Instructional Technologies Symposium, Malatya, Turkey, 26 May 2017, pp.1

III. Bilişim Teknolojileri ve Programlama alanında Kadın

Boyraz A.

Kadınların mesleki eğitimi ve kadın isthidamı, Ankara, Turkey, 13 December 2017

IV. Programlama Derslerinde Çevrimiçi Video Desteği Kullanımı ile Öğrencilerin Eğitsel İnternet Kullanım Özyeterlik İnançları Arasındaki İlişkinin İncelenmesi

Boyraz A., Keskinkılıç F.

11. International Computer Instructional Technologies Symposium, Malatya, Turkey, 26 May 2017, pp.1

V. Envision Future Analysis of IoT Startup

Yazağan A., Celık M., Sakınç Z.

ICITS 2016, Tokyo, Japan, 17 - 19 June 2016

VI. Analysis of Inter-rater Reliability of the Mammography Assessment after Image Processing

Turhan K., Kurt B., Kul S., Boyraz A.

International Work-Conference on Bioinformatics and Biomedical Engineering, Granada, Spain, 15 April 2015, pp.48

VII. Data Reduction for Medical Education Program Evaluation Questionnaire

Turhan K., Kurt B., Yazağan A., Toprak U.

3rd International Work-Conference on Bioinformatics and Biomedical Engineering, Granada, Spain, 15 - 17 April 2015

VIII. Mortality Prediction with Lactate and Lactate Dehydrogenase

Engin Y. Z., Turhan K., Yazagan A., Örem A.

3rd International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO), Grenada, Spain, 15 - 17 April 2015, vol.9043, pp.78-84

IX. Biyoinformatik Araştırmaları ve Araçları

Boyraz A.

Akademik Bilişim, Mersin, Turkey, 5 - 07 February 2014

### **Supported Projects**

BOYRAZ A., Other International Funding Programs, Kod Adı Çocuk, 2015 - 2015

### **Metrics**

Publication: 11

# **Congress and Symposium Activities**

14. Tıp Bilişimi Kongresi, Attendee, İzmir, Turkey, 2023 Kadınların Mesleki Eğitimi ve Kadın İstihdamı, Attendee, Ankara, Turkey, 2017 Bilgisayar ve Öğretim Teknolojileri Sempozyumu, Attendee, Malatya, Turkey, 2017

# **Scholarships**

Doktora Sırası Araştırma Bursu, TUBITAK, 2018 - 2018 Yurtdışı Lisansüstü Eğitim Bursu, Ministry of Education, 2007 - 2010

### **Awards**

BOYRAZ A., Ders Performans Ödülü, ODTÜ, April 2014

# Representation and Promotion Activities

Institutional Representation, Girona University, Spain, Girona, 2022 - 2023
Institutional Representation, Tblisi Medical University, Georgia, Tbilisi, 2019 - 2019
Institutional Representation, University of Elblag, Poland, Elblag, 2016 - 2016
Institutional Representation, University of Elblag, Poland, Elblag, 2015 - 2015

# Non Academic Experience

University, University of Pittsburgh, Medical School