

Yunus Serhat Bıçakçı, PhD

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Citizenship: Turkish

Research interests

Big Data, Data Science, Artificial Intelligence, Machine Learning, Deep Learning, Spatio-Temporal, Mobility, Geospatial

Positions

- 2023 – Present **Visiting Postdoctoral Researcher**
Jill Dando Institute of Security and Crime Science, UCL – London, UK
Conduct independent research and contribute to the advancement of knowledge in the field. This may involve designing and conducting experiments, analyzing data, writing and publishing research papers, and presenting findings at conferences and seminars.
- 2022 – 2023 **Assistant Professor**
Vocational School of Social Sciences, Marmara University – Istanbul, Turkey
Create lesson plans that cover the foundations of technology, guide students through activities that allow them to apply technological solutions to prepare work-life, hold office hours for students to answer questions and provide support.
- 2013 – 2022 **Research Assistant**
Vocational School of Social Sciences, Marmara University – Istanbul, Turkey
Responsible for research related to my research interests, also leading group lessons, grading coursework, setting up student projects and aiding in the supervision of the students.
- 2011 – 2013 **Clerk**
Cyber Crime Bureau, Ministry of Justice – Bursa, Turkey
Under the supervision of the Prosecutor, performed general clerical functions in support of the Bursa Provincial Prosecutor Office.

Education

- 2014 – 2021 **Istanbul Technical University** – Istanbul, Turkey
PhD in Applied Informatics
Geographical Information Technologies Program
Mentor: [Prof Dr Dursun Zafer Şeker](#)
- 2011 – 2013 **Sakarya University** – Sakarya, Turkey
MSc in Informations Systems
Management Information Systems Program
Mentor: [Prof Dr Orhan Torkul](#)
- 2007 – 2011 **Anadolu University** – Eskişehir, Turkey
BA in Business Administration
Business Administration Program

Short-Term Study

- 2022 **Google Developers Machine Learning Bootcamp** – Online
Study time: 4 months
Course Instructors: [Andrew NG](#) and [Laurence Moroney](#)
[Certificate of Achievement](#)
- Data Science and Machine Learning Bootcamp** – Online
Study time: 4.5 months
Course Instructor: [Vahit Keskin](#)
[Certificate of Achievement](#)

Book Chapter

- 2024 **Big Data Usage Opportunities for Interactive Crime Mapping**
Yunus Serhat Bıçakçı, Alina Ristea, Kate Bowers.
New Research in Crime Modeling and Mapping Using Geospatial Technologies, In: Leitner, M. (eds), *New Research in Crime Modeling and Mapping Using Geospatial Technologies*. Geotechnologies and the Environment, Springer, Dordrecht. (Accepted - in progress)

- 2022 **Artificial Intelligence Applications in Tourism and Travel Offices**
Yunus Serhat Bıçakçı, Bora Aksu
Digital Transformation Dynamics in Tourism, In Semiz Celik, D. (eds), The Reflections of Digital Transformation on Tourism (pp. 139-152). Istanbul, Turkey: Beta Publishing.

Publications

- 2023 **CNN and Transformer U-Nets in Multiple Sclerosis Lesion Segmentation: A Comparative Assessment**
Beytullah Sarıca, Yunus Serhat Bıçakçı, Dursun Zafer Şeker.
The American Journal of Neuroradiology (AJNR) / in progress

ATTransUNet: Semantic Segmentation Model for Building Segmentation from Aerial Image and Laser Data [\(link\)](#)

Yunus Serhat Bıçakçı, Beytullah Sarıca.
Nordic Machine Intelligence, 2(3).

- 2020 **Location-Based Analyses for Electronic Monitoring of Parolees** [\(link\)](#)
Yunus Serhat Bıçakçı, Dursun Zafer Seker, Hande Demirel.
ISPRS International Journal of Geo-Information, 9(5), 296.

- 2019 **Spora Yönelik Tutum İle Yaşam Doyumu Arasındaki İlişki: Marmara Üniversitesi Sosyal Bilimler Meslek Yüksekokulu Öğrencileri Örneği /in Turkish** [\(link\)](#)
Cağdaş Caz, Yunus Serhat Bıçakçı, Fatma Firuzan Nakipoğlu.
Gümüşhane Üniversitesi Sosyal Bilimler Enstitüsü Elektronik Dergisi, 10(3), 484–491.

- 2017 **Spatio-temporal analyses to estimate speed information for transport forecasting and scenario testing** [\(link\)](#)
Yunus Serhat Bıçakçı, Beytullah Sarıca, Mete Ercan Pakdil, Batuhan Yazırlı, Hande Demirel.
Fresenius Environmental Bulletin, 26(1).

Presentations

- 2023 **Using Big Data, Artificial Intelligence and Cloud Technologies for Interactive Crime Mapping**
Yunus Serhat Bıçakçı, Alina Ristea, Kate Bowers.
Stockholm Criminology Symposium. [\(link\)](#)

Application of Natural Language Processing Techniques for Crime Detection

Yunus Serhat Bıçakçı, Alina Ristea, Kate Bowers.

Environmental Criminology and Crime Analysis (ECCA) 2023 ([link](#)).

2022 **Artificial Intelligence Applications for Social Municipality: The Case of Chatbot**

Yunus Serhat Bıçakçı.

International VI. Civil Strategy Symposium. ([link](#))

2017 **Büro Yönetimi ve Yönetici Asistanlığı Öğrencilerinin Beklentilerinin Belirlenmesi**

Yunus Serhat Bıçakçı, Fatma Firuzan Nakipoğlu.

VI. Uluslararası Meslek Yüksekokulları Sempozyumu.

2015 **Elektronik İzleme Teknolojisi ve Türkiye’de Uygulanması**

Yunus Serhat Bıçakçı, Dursun Zafer Şeker.

Türkiye’de Denetimli Serbestlik 10. Yıl Uluslararası Yaklaşımlar Sempozyumu.

Workshops

2023 **Mobile Phone Data for Mobility Workshop.** ([Online](#)) 06-07 December, 2023, UK.

Spatial Data Science Across Languages (SDSL) . ([In-person](#)) 18-19 September, 2023, Münster, Germany.

2nd Cardiff NLP Summer Workshop. ([In-person](#)) 26-27 June, 2023, Cardiff, UK.

Teaching experience

Fall 2018 – 2022 Teaching, BSP2007: Office Programs
Teaching, ILT2005: Media Literacy

Spring 2018 – 2022 Teaching, BSP1005: Information and Communication Technology
Teaching, ILT2006: Management Information Systems
Teaching, BSP1060: Office Programs
Teaching, BYS2034: Time Management

Doctoral Dissertation

- 2021 **”Spatio-Temporal Analysis of Applied Electronic Monitoring on Parolees of Mobility: A Case Study in Istanbul”** Department of Applied Informatics, Istanbul Technical University ([link](#))

University Service

- 2022 – 2022 **Editorial Board (Co-Editor)**
The Social Research Journal of Marmara University
- 2021 – 2022 **Journal Referee**
International Humanities and Social Science Review
- 2013 – 2022 **Marmara University Vocational School of Social Sciences**
Member of Board, Department of Secretary and Office Management
Academic Process Manager, Department of Secretary and Office Management
Web Coordinator, Vocational School of Social Sciences (2014 – 2018)
Manager, Vocational School of Social Sciences Football Team (2014 – 2018)

Technical skills

Programming Languages: Python, R, SQL

Big Data – Machine Learning Libraries & Frameworks:

Python: TensorFlow, Keras, scikit-learn, PyTorch, Pandas, GeoPandas, MovingPandas, NetworkX, Mesa

R: dplyr, ggplot2, Tidyverse, mlr, sf, sp, igraph, statnet

Data Science – Miscellaneous Technologies & Libraries & Frameworks:

GeoVisualisation, NLP, Spatial-Temporal Analysis, Git, Google Cloud, Docker, SQL, MsSQL, PostgreSQL, QGis, ArcGIS, \LaTeX

Talks

Foundations of Convolutional Neural Networks – Google ML Bootcamp 2023 & inzva – 07/2023 ([link](#))

TensorFlow Basics – Google DSC Bandırma University – 12/2022 ([link](#))

Introduction to Machine Learning – Google DSC Işık University – 11/2022 ([link](#))

Certifications

Tensorflow - [*TensorFlow Developer Certificate*](#)

Coursera - [*Deep Learning Certificate*](#) – [*DeepLearning.AI TensorFlow Developer Certificate*](#)

NVIDIA - [*Fundamentals of Deep Learning*](#)

Google Cloud & Istanbul Data Science Academy - [*Machine Learning Bootcamp*](#)

DataCamp - [*Intermediate R*](#)

Google Cloud - [*Google Cloud Skills Boost Page*](#) – [*Google Developer Page*](#)

Other skills

Sports

Football (UEFA C Licence–Coaching, The FA Level 7–Referee)

Taekwon-do (2nd Dan Black Belt–Coaching)

Kick-Box (1st Dan Black Belt)

References

Prof. Kate Bowers – Professor in Department of Security and Crime Science - University College London - kate.bowers@ucl.ac.uk

Prof. Dursun Zafer Seker – Professor in Department of Geomatics Engineering - Istanbul Technical University - seker@itu.edu.tr

Prof. Hande Demirel – Professor in Department of Geomatics Engineering - Istanbul Technical University - hande.demirel@itu.edu.tr

Dr. Alina Ristea – Lecturer in Department of Security and Crime Science - University College London - a.ristea@ucl.ac.uk