

# Ozancan Ozdemir

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## EDUCATION

- **Doctor of Philosophy in Statistics, GPA: 3.94** October 2020-Present  
*Middle East Technical University*
- **Master of Science in Statistics, Valedictorian, GPA: 4.00** September 2017- August 2020  
*Middle East Technical University*  
Thesis Title: Performance Comparison of Machine Learning Methods and Traditional Time Series Methods for forecasting, Under the supervision of Yozgatligil C.
- **Bachelor of Science in Statistics, Valedictorian, GPA: 3.74** September 2012- June 2017  
*Middle East Technical University*

## EXPERIENCE

- **Researcher** October 2021-Present  
*TED University* *Turkish Scientific and Technological Research Council, PhD fellowship*  
Managing, manipulating and visualizing EEG data using MATLAB. Developing subject specific machine learning and deep learning models using scikitlearn and Pytorch enviroments.
- **Researcher** August 2022-Present  
*Arizona Technical University and Ozyegin University Collaboration*  
Managing and manipulating text data using R for NLP model. Conducting a descriptive analysis using quanteda package. Developing machine learning models for sentiment classification in R.
- **Co-founder** April 2020-Present  
*VeriPie*  
Founded one of the first data journal that shares a statistical article about topical issues in Turkey.
- **Research and Teaching Assistant** November 2017-Present  
*Middle East Technical University* *Department of Statistics*  
Teaching several lectures including Machine Learning, Applied Time Series, Data Visualization, Advanced Statistical Data Analysis, Statistical Computing, Stochastic Processes, Mathematical Statistics, Probability, and Multivariate Statistical Analysis.
- **Student Assistant** October 2016-May 2017  
*Middle East Technical University* *Department of Statistics*  
Grading homeworks and quizzes of some bachelor courses in the Department of Statistics at METU.
- **Summer Intern** July 2016 - a month  
*Central Bank of Turkey* *Department of Banking and Financial Institution*
- **Summer Intern** June 2016 - a month  
*Ministry of Treasury and Finance* *Department of Insurance and Actuarial Science*

## SKILLS

R, R Shiny, Python, Pytorch, scikit-learn, TensorFlow, SQL, SPSS, MATLAB, SAS, Minitab, Tableau, Flourish, HTML, Latex, Adobe Photoshop, Time Series Analysis and Forecasting, Statistical Modelling, Machine Learning Applications, Deep Learning Applications, COVID-19 Data Analysis, Biostatistics, Data Visualization, Developing R and Python Applications, Data-Based Policy Development.

## PROJECTS

- **Effect of the Parent and Youth Helpline on Parental Stress During Covid:** (Work in progress) The goal of this study is to determine whether callers' speech patterns changed between the beginning and finish of calls using audio recordings of calls that Parents Anonymous recorded. Changes in speech patterns will reveal whether anxious behaviors subsided during the course of the calls. Tech: NLP, R, Python
- **Development of a Hand Robotic Mirror Therapy System Based on Motor Learning:** (Work in progress) In this project, we propose a robotic hand rehabilitation system for hemiplegia patients based on fine grip movement. Tech: Python, Pytorch
- **Medium Term Wind Power Forecasting Using Deep Learning:** In this study, medium term wind power predictions are performed by using Gated Recurrent Unit (GRU), Long Short Term Memory with attention, a hybrid Convolutional Neural Network and Long Short Term Memory architecture and Autoregressive Convolutional Recurrent Neural Network on the real life hourly production data set of a power plant operator to outperform the company's model. company. Tech: Python, Pytorch (January'22)
- **House Price Prediction Using Machine Learning: A Case in Iowa:** In this project, we aim to develop an accurate regression model using tree-based algorithms and explain the type of information which has an impact on the house price. Tech: Python, sklearn (January'22)

- **Evaluation of Reading Skills in the Context of Gender: An Analysis with PISA 2018 Data:** Examining the reading proficiency of girls and boys in Turkey by analyzing data from the International Student Program (PISA) 2018. Tech: SPSS, R Studio. (July '21)
- **Visualization of Turkey Provinces:** Contribution a project in Ozyegin University by drawing Turkey Map in R Tech: R Studio (April'21)

## PUBLICATIONS

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- **Paper in refereed journals:** Orak, N.H., Ozdemir, O., The impacts of COVID-19 lockdown on PM10 and SO2 concentrations and association with human mobility across Turkey, Environmental Research, <https://doi.org/10.1016/j.envres.2021.111018>.
- **Paper in refereed journals:** Mustafa Cavus, Olgun Aydin, Ozan Evkaya, Ozancan Ozdemir, Deniz Bezer, Ugur Dar. Conference Report of Why R? Turkey 2021. The R Journal, 13(1):648-653, June 2021.
- **Paper in refereed journals:** Mustafa Cavus, Olgun Aydin, Ozan Evkaya, Derya Tufan, Filiz Karadag, Ozancan Ozdemir, Deniz Bezer, Ugur Dar. The Conference Report of Why R? Turkey 2022: The First R Conference with Call For Papers in Turkey. The R Journal, 14(2):340-346, June 2022.
- **Abstract in conference proceedings:** Ozdemir O., Yozgatligil C. (2019) "*Performance Comparison of Machine Learning Methods and Time Series Methods for Forecasting*" 5th International Researchers, Statisticians and Young Statisticians Congress, Aydin, Turkey, 18 - 20 October 2019, page.1.
- **Abstract in conference proceedings:** Ozdemir O. , Yozgatligil C. (2019) "*Prediction of Earthquake Magnitude and Direction in Kutahya and Mugla using Machine Learning Methods*" 4. National Insurance and Actuary Congress, Ankara, Turkey, 24 - 25 June 2019, cover.1, number.1, page.81-82.
- **Analysis Report:** Cin M., Ilhan A., Ozdemir O, Duskun Y., Korlu O. (2022) "Evaluation of Reading Skills in the Context of Gender: An Analysis with PISA 2018 Data", <https://doi.org/10.13140/RG.2.2.26165.35044>

## HONORS AND AWARDS

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- Certificate for being the most successful student among master students started in 2017 Department of Statistics, METU - September, 2019
- "4. National Insurance and Actuary Congress Poster Competition Winner", Turkey - June, 2019
- Certificate for being the first among all bachelor students graduated from Department of Statistics, METU- July 2017
- Dean's High Honor List, METU (Both Fall and Spring semesters)- 2013-2017

## INVITED TALKS

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- **Introduction to Tree-Based Algorithms in R** February 2022  
TUMDER - Turkstat Member Association Ankara, Turkey
- **Introduction to R** November 2022  
METU Statistics and Data Science Club and METU Biogen Ankara, Turkey

## VOLUNTEER EXPERIENCE

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- **Event Organizer at WhyR? Turkey 2021 Pre-Meeting, Turkey:** Organized the biggest online R event in Turkey by seminars being about the usage of R in different fields and delivered them reaching over 2000 participants.-April 2021
- **Member of Organizing Committee at WhyR? Turkey 2022, Turkey:** Organized the first scientific conference specified for R in Turkey.-April 2022

## LANGUAGE & INTERESTS

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- **Languages:** Turkish(Native),English(Fluent),German(Beginner),Spanish(Beginner)
- **Interests:** Photography, Urbanism, History, Politics, Football, Movies, Books

## REFERENCES

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- **Prof. Ceylan YOZGATLIGIL:** Department of Statistics, Middle East Technical University, TURKEY,  
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- **Assist. Prof. Fulya GOKALP YAVUZ:** Department of Statistics, Middle East Technical University, TURKEY,  
**E-mail:** fgokalp@metu.edu.tr, **Phone:** +90 (312) 210-2961