

# Alperen Karan

DATA SCIENTIST · MATHEMATICIAN

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“Information is in the tiny patterns that no human eye can see.”

## Summary

Data Scientist at an international 10-minute grocery delivery service company Getir. Proficient in Python and SQL. Experienced in using a wide range of machine learning models (e.g. classification, regression, clustering, dimensionality reduction) and sharing the results with other departments via visualization tools such as Tableau. Mathematician with a deep understanding of the theory behind the learning algorithms. Capable of turning vague problems into concrete business applications. Enjoys teamwork, and always tries keep a positive mood in the team.

## Work Experience

### Getir

Data Scientist

Istanbul, Turkey

Sep. 2021 - Present

- Building successful end-to-end predictive machine/deep learning models for various projects including but not limited to customer segmentation, demand forecasting, propensity modeling and churn prediction.
- Writing complex SQL queries for data analysis.
- Creating Tableau workbooks to track the results of predictive models.
- Writing python scripts that periodically run on airflow pipelines.

### Istanbul Technical University

Research Assistant

Istanbul, Turkey

Dec. 2013 - Sep. 2021

- Leading problem sessions on several mathematics courses such as *Intro. to Programming (MATLAB)* and *Calculus*.
- Proctoring, organizing and grading exams, holding office hours for students, and so on.

## Technical Skills

<b>Data Science</b>	Machine learning, Deep learning, Algorithms, Statistics, Classification, Regression, Clustering, Feature engineering.
<b>Machine Learning</b>	Hands-on experience with Python libraries such as numpy, pandas, matplotlib, scikit-learn, xgboost, keras (tensorflow).
<b>Programming</b>	Python, Bash, (Postgre)SQL, LaTeX.
<b>Software</b>	Jupyter notebooks, Tableau, PyCharm, DataGrip, SPSS.
<b>Other</b>	AWS (Redshift, S3, Step Functions), Git.

## Education

### PhD in Mathematical Engineering, Istanbul Technical University

Thesis Title: *Time Series Classification via Topological Data Analysis*

Istanbul, Turkey

Expected: Apr. 2022

### MA in Psychology, Bogazici University

Thesis Title: *In Search of Tonal Grounds for Short Term Melody Recognition*

Istanbul, Turkey

2019

### MS in Mathematics, Bogazici University

Thesis Title: *Topologies on Families of Closed Subsets*

Istanbul, Turkey

2015

### BS in Mathematics, Bogazici University

Graduation Project: *Proofs of Turan's Theorem*

Istanbul, Turkey

2013

## Publications

1. Karan, A., & Kaygun, A. (2021). Time Series Classification via Topological Data Analysis. *Expert Systems with Applications*, 115326.
2. Karan, A., & Mungan, E. (2018). In Further Search of Tonal Grounds in Short Term Memory of Melodies. In R. Parncutt & A. Schiavio (Ed.), *Proceedings of the Fifteenth International Conference on Music Perception and Cognition* (p. 237-243), Karl-Franzens Universitaet Graz.
3. Gillam, W. D., & Karan, A. (2017). The Hausdorff topology as a moduli space. *Topology and its Applications*, 232, 102-111.