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 — *İstanbul, Turkey*

Data Scientist — *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.
- Creating python cron jobs that periodically insert tables to the database.

Istanbul Technical University — *İstanbul, Turkey*

Research Assistant — *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

Machine Learning	Hands-on experience with Python libraries such as numpy, pandas, matplotlib, scikit-learn, xgboost, keras.
Programming	Python, Bash, (Postgre)SQL, LaTeX.
Software	Jupyter, Tableau, PyCharm, DataGrip, SPSS.
Other	AWS (Redshift, S3, Step Functions), Git.

Education

PhD in Mathematical Engineering, Istanbul Technical University — *Istanbul, Turkey*

Thesis Title: *Time Series Classification via Topological Data Analysis* — *Expected: Apr. 2022*

MA in Psychology, Bogazici University — *Istanbul, Turkey*

Thesis Title: *In Search of Tonal Grounds for Short Term Melody Recognition* — *2019*

MS in Mathematics, Bogazici University — *Istanbul, Turkey*

Thesis Title: *Topologies on Families of Closed Subsets* — *2015*

BS in Mathematics, Bogazici University — *Istanbul, Turkey*

Graduation Project: *Proofs of Turan's Theorem* — *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.