Alperen Karan

Curriculum Vitae

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alperenkaran.github.io

Research Interests

- Machine learning, Deep learning
- Topological data analysis, Persistent homology
- Cognitive psychology, Music cognition

Computer skills

- Python (*fluent*) - hands-on experience in several machine/deep learning libraries (such as numpy, pandas, scikit-learn, keras
- PyCharm, DataGrip, MATLAB, SPSS
- (Postgre)SQL, LaTeX, Git
- Tableau, AWS (Redshift, S3, Step Functions), Airflow

Education

Exp: 04.2022 **PhD**, *Mathematical Engineering*, Istanbul Technical University, Turkey.
Title: Time series classification via Topological Data Analysis

2019 **M.A.**, *Psychology*, Boğaziçi University, Turkey.
Title: In Search of Tonal Grounds for Short Term Melody Recognition

2015 **M.S.**, *Mathematics*, Boğaziçi University, Turkey.
Title: Topologies on Families of Closed Subsets

2013 **B.S.**, *Mathematics*, Boğaziçi University, Turkey.

Work Experience

09.2021 - Present Data Scientist, *Getir*, Turkey.

12.2013 - 09.2021 Research assistant, *Istanbul Technical University*, Turkey.

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.

Languages

- Turkish (*native*)
- English (*fluent*)
- French (*beginner*)