Alperen Karan

Curriculum Vitae

+90 (505) 702 2281
alperenkaran@gmail.com
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 libraries such as numpy, pandas, matplotlib, seaborn, scikit-learn, keras, tensorflow etc.
- SPSS, SQL, MATLAB, LaTeX

Education

Present **PhD**, *Mathematical Engineering*, Istanbul Technical University, Turkey.
2019 **M.A.**, *Psychology*, Boğaziçi University, Turkey.
2015 **M.S.**, *Mathematics*, Boğaziçi University, Turkey.
2013 **B.S.**, *Mathematics*, Boğaziçi University, Turkey.

Certificates

- Inzva - Advanced Algorithm Program (2021)
- Inzva - Applied AI Study Group (in progress)

Work Experience

2013 - Present Research assistant, Istanbul Technical University, Turkey.

Courses Assisted

- Advanced Scientific and Engineering Computing (MATLAB)
- Mathematics I,II, III (for Mathematics students)
- Mathematics I, II (for Engineering students)

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*)