Hazal Mogultay

Dept. of Computer Engineering, METU – Ankara, Turkey

(+90) 530 696 0456 • hazal@ceng.metu.edu.tr • Homepage
ww.linkedin.com/in/hazal-mogultay/

Education

Ph.D. - Department of Computer Engineering *2017 – Present*
Middle East Technical University
CGPA: 3.86/4.00
Passed the qualification exam.

M.Sc. - Department of Computer Engineering *2014–2017*
Middle East Technical University
CGPA: 3.71/4.00
Thesis title: A Hierarchical Representation and Decoding of fMRI Data by Partitioning a Brain Network.
Thesis superviser: Prof. Fatos T. Yarman-Vural)

B.Sc. - Department of Computer Engineering *2009–2014*
Middle East Technical University
CGPA: 3.15/4.00

Projects

Multi-Layered Cognitive Learning Model
Funded by The Scientific and Technological Research Council of Turkey (TÜBİTAK) *2014–2016*
Coordinator: Prof. Fatos T. Yarman-Vural
My Role: I have worked as a researcher in this project. My main contributions include segmentation of human brain through fMRI dataset, and multilayer classification using fuzzy stacked generation (FSG) method.

Deep Learning Course Project *Fall 2017*
Description: I used 3D Convolutional Neural Nets for video classification on a Dynamic Scene Recognition Dataset.

Parallel Programming on GPU Course Project *Fall 2015*
Description: I used GPU programming utilities to optimize and select the parameters of Fuzzy k-NN classifier in an ensemble learning framework.

Work Experience

Research and Teaching Assistant *Sep 2014 – Present*
Department of Computer Engineering
Middle East Technical University

- I have served as a teaching asisstant for the following courses:

  - Digital Image Processing *Fall 2018, 2019, 2020*
  - Introduction to Bioinformatics *Spring 2018,2020*
  - Signals and Systems for Computer Engineers *Spring 2015, 2018*

- Computer Engineering Design I-II *Fall/Spring 2016, 2017, 2018, 2019*
- Introduction to Computer Engineering Concepts *Fall 2014, 2015*
- C Programming *Spring 2014*

Teaching Assistant Representative *2015–2017*
Department of Computer Engineering
Middle East Technical University

Summer Practice *June–August 2013*
Image Processing and Pattern Recognition Lab.
Middle East Technical University

Summer Practice *June–July 2012*
Information Processing Department
National Post Office

Publications

- **Mogultay, H.**, & Kalkan, S, & Vural, F. T. Y. (2018). An Analysis on Disentanglement in Machine Learning. In 30th Signal Processing and Communications Applications Conference (SIU), pp. 1-4, IEEE.
- **Mogultay, H.**, & Vural, F. T. Y. (2018). BrainParcel: A Brain Parcellation Algorithm for Cognitive State Classification. In Graphs in Biomedical Image Analysis and Integrating Medical Imaging and Non-Imaging Modalities pp. 32-42, Springer, Cham.
- **Mogultay, H.**, & Vural, F. T. Y. (2017). Cognitive learner: An ensemble learning architecture for cognitive state classification. In 25th Signal Processing and Communications Applications Conference (SIU), pp. 1-4, IEEE. (**IEEE SPS Turkey, Best Student Paper Award**)
- **Mogultay, H.**, Alkan, S., & Vural, F. T. Y. (2015). Classification of fMRI data by using clustering. In 23th Signal Processing and Communications Applications Conference (SIU), pp. 2381-2383, IEEE.

Awards

- IEEE Signal Processing Society Turkey, Best Student Paper Award for the following paper:
  Mogultay, H., & Vural, F. T. Y. (2017). Cognitive learner: An ensemble learning architecture for cognitive state classification. In 25th Signal Processing and Communications Applications Conference (SIU), pp. 1-4, IEEE.

Research Interests

- Computer Vision
- Deep Learning, Machine learning
- Image Processing, Signal Processing
- fMRI Analysis

Related Courses

PhD: Deep Learning, Probability Theory, Medical Image Analysis
MSc: Applied Parallel Programming on GPU, Machine Learning, Introduction to Computer Vision, Statistical Data Analysis, Pattern Recognition
BSc: Fundamentals of Image Processing