

# Eda Bayram

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🏠 Lausanne, Switzerland  
🌐 [bayrameda.github.io](https://github.com/bayrameda)

PhD candidate, passionate about research on machine learning for graph structured data. A sound background in mathematics including linear algebra, probability, optimization and signal processing. Programming experience in Python (familiarity with ML libraries), C/C++ and Matlab.

## Education

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- Current - Apr 2017** | **PhD, Electrical and Electronics Engineering**  
*École Polytechnique Fédérale de Lausanne (EPFL), Switzerland*
- Thesis study: Representation Learning on Multi-relational Data, under supervision of Prof. Pierre Vandergheynst
  - Supervising semester projects of master students in graph signal processing and graph representation learning.
  - Teaching assistant of *Digital Signal Processing* and *Network Tour of Data Science*.
- Feb 2017 - Sep 2014** | **MSc, Electrical and Electronics Engineering** (Honor Student, GPA: 3.71/4.00)  
*Middle East Technical University (METU), Turkey*
- Specialization on adaptive signal processing with courseworks on linear algebra, optimization, machine learning, computer vision and image processing
  - Thesis study on exploitation of spectral graph theory and graph signal processing frameworks for the analysis of 3D LiDAR point clouds under co-supervision of Prof. Aydin Alatan and Elif Vural.
- Jun 2013 - Sep 2009** | **BSc, Electrical and Electronics Engineering** (Honor Student, GPA: 3.38/4.00)  
*Middle East Technical University (METU), Turkey*
- Senior year specialization on telecommunications and signal processing
  - Graduation project: Interior route-finding, wearable assistive device for visual defective people

## Work and Research Experience

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- Jan 2017 - May 2015** | **System and Design Engineer**  
*Aselsan SST (R&D Defense Industry), Turkey*
- Research and development of target tracking algorithms for day-TV and thermal camera systems.
- Sep 2015 - Jun 2015** | **Research Intern**  
*Signal Processing Laboratory, EPFL, Switzerland*
- Spectral graph-based motion estimation for omnidirectional videos
- Apr 2015 - Jul 2013** | **Software Engineer**  
*Aselsan MGEO (R&D Defense Industry), Turkey*
- Software design and development for the communication of the peripheral modules in embedded systems.
- Jun 2013 - Nov 2012** | **Part-time Software Engineer**  
*Aselsan SST (R&D Defense Industry), Turkey*

## Languages

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**Turkish:** Native  
**English:** Fluent  
**French:** A2/B1  
**German:** A1/A2

## Publications

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- Eda Bayram, Alberto Garcia Duran and Robert West, "Node Attribute Completion on Knowledge Graphs with Multi-Relational Propagation", *Under review*, Nov 2020
- Eda Bayram, Dorina Thanou, Elif Vural and Pascal Frossard, "Mask Combination of Multi-layer Graphs for Global Structure Inference", *IEEE Transactions on Signal and Information Processing over Networks* 6 : 394-406, 2020
- Eda Bayram, Pascal Frossard, Elif Vural and Aydin Alatan, "Analysis of airborne LiDAR point clouds with spectral graph filtering", *IEEE Geoscience and Remote Sensing Letters* 15.8 : 1284-1288., 2018
- Eda Bayram, Elif Vural, and Aydin Alatan. "A graph signal filtering-based approach for detection of different edge types on airborne lidar data" *Lidar Technologies, Techniques, and Measurements for Atmospheric Remote Sensing XIII. Vol. 10429. International Society for Optics and Photonics*, 2017.
- Eda Bayram, "Spectral Graph Based Approach for Analysis of 3D LiDAR Point Clouds" *Master Thesis, METU, Ankara*, 2017.