curriculum vitæ of

Ahmet Gürhan

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EDUCATION

| 2014 – 2020 | **BSc.** in Electrical and Electronics Engineering | BOĞAZIÇI UNIVERSITY - ISTANBUL , TURKEY |

Specialization Option: Telecommunications Engineering
GPA: 3.35 / 4
ALES (Grad School Exam) Score: 100/100, 1st place in 230 thousand attendants

| 2016 – 2020 | **BSc.** in Physics | BOĞAZIÇI UNIVERSITY - ISTANBUL , TURKEY |

Double Major
GPA: 3.35 / 4

| Fall 2017 | **Exchange Programme** | UNIVERSITY OF MARYLAND - MD , USA |

Department: Electrical & Computer Engineering (Study Abroad)
GPA: 4.00 / 4

| 2010 – 2014 | **High School** | IZMIR FEN LISESI - IZMIR , TURKEY |

GPA: 95.47 / 100
University Entrance Exam Score: 547/560, 23rd place in 2 million attendants

WORK EXPERIENCE

| March 2021 - present | **Machine Learning Engineer** | EBRANDVALUE BRAND INTELLIGENCE / ISTANBUL, TURKEY |

Sentiment Analysis in Turkish:
    Gathering bias-free training data and performing data preprocessing
    Fine tuning of BERT model via Transfer Learning and deploying the model on Kubernetes
    Collecting the mistakes of the model from user clicks and using them for training during the next cycle
Setting up a Neo4j Graph Database infrastructure:
    Deploying a standalone Neo4j Graph Database on Kubernetes
    Migrating the data of 180 Million social media users with following-follower relationships into Neo4j
Fake News detection:
    A sub-graph classification task for checking the integrity of viral content using Graph Neural Networks
    Fine tuning of a Graph Convolutional Network and deploying the model on Kubernetes
Community Detection and Centrality Scoring in networks:
    Deciding for the most influential social media users engaged with a content when the content goes viral
    Detecting distant communities within a network using Louvain algorithm
Holding weekly seminars for fellow developers in the company on the core concepts of Statistics, Data
Science and Deep Learning.

| June - December 2019 | **Data Analyst** | DOKTAR AGRICULTURAL SOLUTIONS / ISTANBUL, TURKEY |

A Computer Vision project for Semantic Segmentation using geospatioal R Packages.
Main Topic: Land-Cover Crop Type Classification Using Machine Learning
Automation and fine tuning of data flow in Random Forest models

| June - August 2018 | **Intern** at METU - Physics | MIDDLE EAST TECHNICAL UNIVERSITY / ANKARA, TURKEY |

Defocusing Beamline Project (in collaboration with CERN)
Experimental Space Radiation and Astroparticle Physics Group - METU
Main Topic: Single-Event Effect Radiation Tests
Establishing hazardous radiation alert system

| June - July 2017 | **Intern** at Test & Certification Department | SIEMENS AG / ERLANGEN, GERMANY |

Main Topic: Frequency Converters
Verification of product specifications

Skills

Programming:
 Python - R - MATLAB - Julia - JavaScript

Libraries & Technologies:
 PyTorch - TensorFlow - Scikit-Learn - Pandas - NumPy - Kubernetes - Flask - Docker - Django
 Elasticsearch - MongoDB - MySQL - PostgreSQL - Neo4j - ArangoDB - Terraform - RabbitMQ

Languages:
 Turkish - Native
 English - IELTS Score: 8.0/9.0

Reseacrh

August - December 2020   **Researcher** at Autonomous Vision Group   Koç University - Istanbul , Turkey

Main Interest: Autonomous Driving
Topics: Graph Neural Networks, Trajectory Predictions, Intent Recognition
Validation and replication of state-of-the-art trajectory prediction models

January - June 2020   **Senior Design Project** at Lung Acoustics Laboratory   Boğaziçi University - Istanbul , Turkey

Main Interest: Detection of Diseases in Respiratory Sounds
Mel Frequency Cepstral Coefficients Analysis
Feature Extraction, Classifier Fine Tuning
Comparison of Machine Learning Models (KNN, Random Forest, MLP, RNN)

August - December 2019   **Researcher** at Volumetric Analysis Visualization Group   Boğaziçi University - Istanbul , Turkey

Main Interest: Object Detection and Counting in Orchard Images
Data Preprocessing, Color Space and Texture Analysis
Sequential Floating Feature Selection Process for Support Vector Machines
Pixel-wise Binary Image Segmentation Pipeline Design

Projects

October - November 2020   **Term Project** of Deep Learning Class   Koç University - Istanbul , Turkey

Title: Counterfactual Learning of Physical Dynamics
Topics: Graph Neural Networks, Counterfactual Learning, Recurrent Neural Networks, Latent
Representations
Replication of a state-of-the-art paper using Julia language and KNet Deep Learning framework.

March - May 2019   **Term Project** of Speech Processing Class   Boğaziçi University - Istanbul , Turkey

Title: Speech Activity Detection
Topics: Data Preprocessing, MFCC Features, Fourier Analysis, Naive Bayes Classification
A speech recognition pipeline in a noisy environment with several sample recordings from different
languages, genders and ages.

References

Yasin Meydan
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Eren Gül
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