

SAMET DEMİR

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EDUCATION

Koç University, Turkey Ph.D. in Computer Science and Engineering	August 2020 - now GPA: 3.69 / 4.0
Boğaziçi University, Turkey B.Sc. in Computer Engineering	August 2015 - August 2020 GPA: 3.37 / 4.0

PUBLICATIONS

Asymptotic Analysis of Two-Layer Neural Networks after One Gradient Step under Gaussian Mixtures Data with Structure <i>International Conference on Learning Representations (ICLR) 2025</i>	2025 Advisor: Prof. Zafer Doğan
Random Features Outperform Linear Models: Effect of Strong Input-Label Correlation in Spiked Covariance Data <i>arXiv:2409.20250</i>	2024 Advisor: Zafer Doğan
Studying Generalization Performance of Random Feature Model through Equivalent Models <i>IEEE SIU 2024</i>	2024 Advisor: Prof. Zafer Doğan
Optimal Nonlinearities Improve Generalization Performance of Random Features <i>arXiv:2309.16846</i> <i>Asian Conference on Machine Learning (ACML) 2023</i>	2023 Advisor: Prof. Zafer Doğan
Reward Guided Test Generation For Deep Learning <i>arXiv:1911.10621</i> <i>Workshop on Artificial Intelligence Safety 2020</i>	2020 Co-authors: Hasan F. Enişer and Prof. Alper Şen
Neural Academic Paper Generation <i>arXiv:1912.01982</i>	2019 Co-authors: Uras Mutlu and Özgür Özdemir

RESEARCH EXPERIENCE

Koç University - KUIS AI Lab <i>Research Assistant</i> Research on “Theory of Machine Learning in High Dimensions”	September 2020 - now Advisor: Prof. Zafer Doğan
Boğaziçi University - Dependable Systems Group <i>Undergraduate Research Assistant</i> Research on “Testing Deep Neural Networks”	March 2019 - July 2020 Advisor: Prof. Alper Şen
Boğaziçi University - PILAB-SIGMA Research Group <i>Undergraduate Research Assistant</i> Research on “Turkish Word Stemming”	September 2018 - January 2019 Advisor: Prof. A. Taylan Cemgil

TEACHING EXPERIENCE

Koç University - Programming for Engineers (ELEC 230) <i>Teaching Assistant</i>	September 2024 - now Instructor: Prof. Zafer Doğan
Koç University - Algorithms & Complexity (COMP 305) <i>Teaching Assistant</i>	September 2023 - June 2024 Instructor: Prof. Deniz Yüret
Koç University - Software Engineering (COMP 302) <i>Teaching Assistant</i>	February 2023 - June 2023 Instructor: Prof. Attila Gürsoy

Koç University - Programming with Python (COMP 125)

Teaching Assistant

September 2022 - January 2023

Instructor: Prof. Çiğdem Gündüz Demir

Koç University - Computer Systems and Programming (COMP 201)

Teaching Assistant

September 2020 - June 2022

Instructor: Prof. Aykut Erdem

Boğaziçi University - Introduction to Computing (CMPE 150)

Undergraduate Teaching Assistant

September 2017 - January 2018

INDUSTRY EXPERIENCE

armut.com

Machine Learning and Artificial Intelligence Intern

January 2019 - March 2019

Supervisor: Günay Özkan

Project: Improving the Recommendation System

“Recurrent Neural Networks and Neural ODEs for Recommendation Systems”

intertech

Software Engineering and Business Analysis Intern

August 2019 - September 2019

Supervisor: Harun Can Tekin

Project: Improving the Process Design Management

TUBİTAK (The Scientific and Technological Research Council of Turkey) August 2018 - September 2018

Software Engineering Intern

Supervisor: Erkan Yalçın

Microservices Architecture with Java - Spring Framework

CERTIFICATES AND AWARDS

Teaching Assistant Award

Koç University - Graduate School of Sciences and Engineering

Director: Prof. Zehra Özlem Keskin Özkaya

Fall 2024

sametdemir.xyz/uploads/Fall24-GSSE-TA-Award.jpg

Computational Neuroscience: Neuronal Dynamics of Cognition

EPFLx - edX

July 2018

Lecturer : Prof. Wulfram Gerstner

courses.edx.org/certificates/ca3fb903e5a94974a66929f4ffa28e78

Improving Deep Neural Networks:

Hyper-parameter tuning, Regularization and Optimization

deeplearning.ai - coursera.org

January 2018

Lecturer : Prof. Andrew Ng

coursera.org/account/accomplishments/certificate/3S2GR8AVMLC7

Neural Networks and Deep Learning

deeplearning.ai - coursera.org

August 2017

Lecturer : Prof. Andrew Ng

coursera.org/account/accomplishments/certificate/88JAH8KGEZ7A

Machine Learning

Stanford University - coursera.org

October 2016

Lecturer : Prof. Andrew Ng

coursera.org/account/accomplishments/certificate/JUY53X4XZMVB

PROJECTS

Short Text Analysis for Cryptocurrency Price Forecasting

COMP542: Natural Language Processing - Term Project

March 2022 - June 2022

Lecturer: Prof. Deniz Yüret

github.com/simitii/Short-Text-Analysis-for-Cryptocurrency-Price-Forecasting

Improving Robustness of Deep Learning

Undergraduate Senior Project

January 2020 - June 2020

Supervisor: Prof. Alper Şen

legacy.cmpe.bogazici.edu.tr/content/improving-robustness-deep-learning-evolutionary-computation-adversarial-attack

Learn to Move with Deep Reinforcement Learning

CMPE462: Machine Learning - Term Project

March 2018 - June 2018

Lecturer: Prof. A. Taylan Cemgil

github.com/simitii/Learn-to-Move-with-Deep-Reinforcement-Learning