BARIS YAMANSAVASCILAR

Software and Research Engineer

Website: *http://barisyamansavascilar.com*
LinkedIn: *linkedin.com/in/baris-yamansavascilar*
E-mail: *barisyamansavascilar@gmail.com*

OBJECTIVE

My goal is to develop software products and services that can achieve significant success considering the expectation of the industry and end-users. As a PhD candidate, I am confident that my experience in academia, in which I joined many projects collaborated with industry, would provide me with substantial advantages regarding novelty. My expertise is on **backend systems** and **machine learning solutions** on which I have conducted many projects over the years.

EDUCATION

Doctor of Philosophy | ***Computer Engineering*** Sept. 2019 – Present
Bogazici University Istanbul, Turkey
Teaching Assistant: CmpE 250 - Data Structures and Algorithms
Thesis Topic: Deep Learning Systems for Edge Computing
Advisor: Prof. Cem Ersoy

Master of Science | ***Computer Engineering*** Sept. 2016 – May 2019
Bogazici University Istanbul, Turkey
Thesis: Fault Tolerance in the Data Plane of Software-Defined Networks
Advisor: Prof. Cem Ersoy

Bachelor of Science | ***Computer Engineering*** Sept. 2010 – May 2015
Yildiz Technical University Istanbul, Turkey
Thesis: Network Traffic Classification Using Machine Learning Techniques
Advisor: Prof. Mehmet Amac Guvensan

WORK EXPERIENCE

Research Assistant Sept. 2016 – Present
Bogazici University - NETLAB Istanbul, Turkey
- I have studied on efficient offloading approaches in edge computing using deep reinforcement learning.
- I developed an efficient QoE mechanism for Dynamic Adaptive Streaming over HTTP (DASH) considering the congestion problem in Software-Defined Networks (SDN).
- 802.11ax (WiFi 6) OFDMA scheduler was developed with the collaboration of AirTies and the solution has been applied in the industry.
- The fault tolerance problem in Software-Defined Networks (SDN) was investigated.

Researcher July 2015 – July 2016
Yildiz Technical University - Intelligent Systems Lab Istanbul, Turkey
- The network intrusion detection problem was investigated using deep learning with the collaboration of Crypttech.
- The network traffic classification problem was studied using machine learning.
- I studied on human activity recognition using smartphones.

Intern Aug. 2014
Microsoft Istanbul, Turkey

Intern June 2014 – July 2014
Ziraat Technology Istanbul, Turkey

Intern July 2013 – Aug. 2013
Turk Telekom Istanbul, Turkey

SKILLS

Programming: C, C++, Java, Python, Swift, MATLAB, Javascript, HTML, CSS
Software/System: Docker, Machine/Deep Learning, AWS EC2, DigitalOcean, Wireshark
Framework/Library: Spring Boot, Django, Keras, TensorFlow, DASH
Simulator/Emulator: NS-3, Mininet, CloudSim, EdgeCloudSim
Languages: English (Fluent), French (B1), Turkish (Native)

INDUSTRY PROJECTS AND RESEARCH

Deep Learning Systems for Edge Computing Sept. 2019 – Present
Bogazici University

OFDMA Scheduler Development for IEEE 802.11ax March. 2019 – March. 2020
Bogazici University, with the collaboration of AirTies

Fault Tolerance in the Data Plane of Software-Defined Networks Jan. 2017 – May 2019
Bogazici University, MSc Thesis

Service Management on Multitier IT Architecture Jan. 2017 – Jan. 2019
Bogazici University

Distributed Data Processing and Applications for Mobile Edge Computing Aug. 2017 – June 2018
Bogazici University, with the collaboration of Netas

Advanced Threat Detection Using Machine Learning Techniques July 2015 – July 2016
Yildiz Technical University, with the collaboration of Crypttech

Network Traffic Classification Using Machine Learning Techniques Sept. 2014 – June 2015
Yildiz Technical University, BSc Thesis

Activity Recognition on Smartphones Sept. 2013 – June 2014
Yildiz Technical University, BSc Junior Project

SELECTED PUBLICATIONS

B. Yamansavascilar, A. C. Baktir, Cagatay Sonmez, A. Ozgovde, and C. Ersoy, "DeepEdge: A Deep Reinforcement Learning based Task Orchestrator for Edge Computing", *IEEE Transactions on Network Science and Engineering*, 2022.

B. Yamansavascilar, A. C. Baktir, A. Ozgovde, and C. Ersoy, "Fault tolerance in SDN Data Plane Considering Network and Application Based Metrics", *Journal of Network and Computer Applications*, vol. 170, pp. 102780, 2020.

M. S. Kuran, A. Dilmac, O. Topal, **B. Yamansavascilar**, S. Avallone, T. Tugcu, "Throughput-maximizing OFDMA Scheduler for IEEE 802.11ax Networks", *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, pp. 1-7, 2020, Virtual Conference.

B. Yamansavascilar, A. C. Baktir, A. Ozgovde, and C. Ersoy, "Enhancing QoE for Video Streaming Considering Congestion: A Fault Tolerance Approach", *IEEE INFOCOM 2019 - IEEE Conference on Computer Communications Workshops*, pp. 258-263, 2019, Paris, France.

B. Yamansavascilar, M. A. Guvensan, A. G. Yavuz, and M. E. Karsligil, "Application Identification via Network Traffic Classification", *The International Conference on Computing, Networking and Communications (ICNC)*, pp. 843-848, 2017, San Francisco, USA.

B. Yamansavascilar, M. A. Guvensan, "Activity Recognition on Smartphones: Efficient Sampling Rates and Window Sizes", *The International Workshop on the Impact of Human Mobility in Pervasive Systems and Applications (PerMoby)*, pp. 1-6, 2016, Sydney, Australia.