

UFUK USUBUTUN

ufukusubutun.github.io ♦ New York NY

+1 (646) 217-9430 ♦ usubutun@nyu.edu

EDUCATION

New York University Tandon School of Engineering, Brooklyn NY

September 2020 - ongoing

PhD in Electrical Engineering - Supervisor: Prof. Shivendra Panwar

CGPA: 3.86

Bilkent University, Ankara TR

August 2015 - January 2020

B.Sc. in Electrical and Electronics Engineering

CGPA: 3.76

Minor Degree in Political Science

CGPA: 3.73

AGH University of Science and Technology, Cracow PL

February 2018 - July 2018

Exchange Student in Electrical Engineering

EXPERIENCE

AT&T Labs, Bedminster NJ USA

June - August 2023

Summer Research Intern

RAN optimization and trade-offs, Open-RAN

Nokia Bell Labs, Murray Hill NJ USA

June - August 2022

Networking Research Intern

Worked on solving traffic oblivious flow routing problems using machine learning tools at the Networking Systems Department under the supervision of Murali Kodialam and Tv Lakshman of Bell Labs Core Research. Received Outstanding Innovation Award for work during internship and presented it to Bell Labs Leadership.

NYU Tandon School of Engineering, Brooklyn NY USA

Sept 2021 - ongoing

Course Assistant

Teaching, grading, assignment preparation and administrative duties on graduate Internet Architectures & Protocols and Network Modeling & Analysis Classes taught by Prof. Shivendra Panwar and on undergraduate Computer Engineering Senior Design Project Class taught by Prof. Fraida Fund.

Darkblue Telecommunication Systems, Ankara TR

February - August 2020

Project Engineer

Development and implementation work at the LTE leg of a Signals of Opportunity Navigation Project developed for UAVs. Initial proof of concept work consisted of simultaneous tracking of multiple LTE base stations using Channel Reference Signals and location estimation using an Extended Kalman Filter. Upon success, a real-time implementation was built on a Xilinx SoC.

Fraunhofer Institute for Integrated Circuits, Erlangen DE

June - September 2019

Undergraduate Research Intern

Research project under Communication Systems Department around low-latency goals for wireless. Tasks included development of an OFDM based cooperative telecommunications simulator on Python for testing of proposed relaying schemes while using cyclic delay diversity at the transmitting antennas.

PUBLICATIONS

Oblivious Routing Using Learning Methods

Ufuk Usubutun, Murali Kodialam, T.V. Lakshman, Shivendra Panwar

To appear at IEEE Global Communications Conference 2023

Do Switches Still Need to Deliver Packets in Sequence?

Best Paper Award

Ufuk Usubutun, Fraida Fund, Shivendra Panwar

IEEE High Performance Switching and Routing Conference 2023

SKILLS

Related Course Work	Internet Arch. & Protocols, Network Modeling & Analysis, Cloud Computing & DCNs, Data Structures & Algorithms, Optimization, Wireless Comms., Machine Learning, Reinforcement Learning & Optimal Control
Experience With	TCP Loss Detection Algorithms: particularly RFCs 8985 & 6675, GENI and Cloudlab Network Testbeds, Analysis of Packet Captures Queuing Theory and Markov Chain Modelling, Routing Optimization Problem Formulation and Descent Based Solutions
Programming Experience	<i>bash</i> scripting for large scale network experiments, linux kernel patching <i>pytorch</i> implementation of constrained routing optimization problems, <i>pandas</i> analysis of experimental data, Matlab LTE, 5G and Control System Toolbox experience, Java and Python OOP experience

ACADEMIC ACHIEVEMENTS

Scored in the top 0.25% in the Turkey-wide University Entrance Exam with around 2 Million exam takers.

Awarded Academic Excellence Scholarships waiving tuition of undergraduate studies.

School of Engineering Fellow at NYU Tandon. Covers tuition, health insurance and stipend.

LANGUAGES

Turkish: Native

English: Fluent

French: Proficient

TOEFL Score: 109/120

Delf B2 Certificate

VOLUNTARY ACTIVITIES

Mentorship to High School Students within NYU Tandon ARISE High School Research Program.

Co-leading of high school FRC robotics team Anatolian Eaglebots 3390. Gave basic coding and electronics trainings for high school students and took part in design and strategy decisions for the team.

Executive Board Membership of Sociology Club for 2.5 years at Bilkent University. Organized conferences, discussion sessions and guided city walks with academics.

Participant and Executive Board Member of Theatre and Improvisation Club for 4 years at Bilkent University. Acted in plays and improvisations. Directed an planned numerous improvisation sessions.

PERSONAL TRAITS

Passionate about history, foreign languages and jazz.