

Yiğit Narter

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Education

Bilkent University

BS in Electrical and Electronics Engineering, top-ranked and High Honour student

Ankara, Turkey

Sept 2021 – June 2025

- **GPA: 3.99/4.00.** Ranked **1st out of 242 students.** Granted comprehensive scholarship by the university.
- **Related coursework:** Signals and Systems, Probability and Statistics, Engineering Mathematics I-II, Digital Telecommunications, Feedback Control Systems.

École Polytechnique Fédérale de Lausanne (EPFL)

Electrical and Electronics Engineering, exchange student

Lausanne, Switzerland

Feb 2024 – July 2024

- Exchange semester with ERASMUS Programme.
- **Related coursework:** Machine Learning, Signal Processing for Communications, Computer Vision.

Başkent University Ayşeabla Science High School

High School Diploma

Ankara, Turkey

Sept 2017 – June 2021

- GPA: 99.6/100. Graduated as the top student.

Honors and Scholarships

High Honor Student, Bilkent University

2021 – 2024

Swiss European Mobility Programme (SEMP) Scholarship, EPFL

Feb 2024 – July 2024

Comprehensive Scholarship, Bilkent University

2021 – 2025

- Covering 100% of tuition and a monthly stipend.

Merit-Based Scholarship, Credit and Dormitories Institution (KYK)

2021 – 2025

- Grant awarded to the top 100 ranked students in the national university entrance exam (YKS).

Ranked 56th among 2.6 million students in the university entrance exam (YKS)

Aug 2021

Publications

Yiğit Narter, Alihan Hüyük, Mihaela van der Schaar, Cem Tekin. “Unified Screening for Multiple Diseases.” ***International Conference on Machine Learning (ICML) 2025.*** Accepted in May 2025.

Research Experience

Undergraduate Researcher

Bilkent University

Ankara, Turkey

Aug 2024 – present

- Working under the supervision of Prof. Cem Tekin and in collaboration with Prof. Mihaela van der Schaar from Cambridge University.
- Our research aims to unify the design of screening programs for multiple diseases, by taking the competing risks of each disease into consideration when determining who to screen for what condition.
- Transformed the unified screening into a convex optimization problem, introduced Lagrangian relaxation to theoretically characterize the optimal solution and boundaries, and created a simulation in Python to solve it with CVXPY linear programming and Monte Carlo method.
- **Tools Used:** CVXPY, Python.

Undergraduate Researcher

CVLAB, EPFL

Lausanne, Switzerland

Jan 2024 – July 2024

- Conducted research at CVLAB of Prof. Pascal Fua, under the supervision of Asst. Prof. Doruk Öner.
- Took part in the implementation of a deep learning-based 3D neuron segmentation tool on Vaa3D software.
- Applied deep learning techniques such as training CNNs and U-Net, integrated new methods like unsupervised transfer learning to enhance the segmentation, and tested the tool's performance on various neuron datasets with successful results.
- **Tools Used:** Vaa3D, C++, Python, Qt, Napari library.

Additional Experience

Software Engineer Intern

HAVELSAN

Ankara, Turkey

Aug 2024 – Sept 2024

- Implemented a real-time panorama stitching application that combines multiple live camera feeds to enhance the field of view (FoV) of AR applications.
- Integrated a one-time calibration process for homography estimation to increase FPS rate, and demonstrated the application's feasibility to simulators and other AR applications.
- Tools and techniques:** Python, OpenCV, Pillow (PIL), SURF, RANSAC.

Radar Engineering Intern

METEKSAN Defence Inc.

Ankara, Turkey

Aug 2023

- Created a radar altimeter simulator with GUI, and later implemented the simulation on a Tiva C board with direct memory access (DMA) to prevent delays from CPU intervention.
- Tools and techniques:** C++, Embedded C, Qt, CSS, Tiva C evaluation board, UART, DMA.

Notable Projects

Direct Radar Target Detection with Artificial Neural Networks

present

- Industrial design project under the supervision of Prof. Orhan Arıkan, in collaboration with METEKSAN. Focused on real-time target detection and classification using NNs with an FMCW radar test kit operating at 60 MHz.
- Exploring feasible NN architectures to replace CFAR detectors, building a fully convolutional network that takes Range-Azimuth maps as 2D inputs, training it using MATLAB-simulated data, testing it with raw data from the test kit, and implementing it in an FPGA environment.
- Tools Used:** MATLAB, Python, TensorFlow, Xilinx Zynq-7000 with DPU IP core, AWR6843ISK.

Machine Learning Term Project

Jun 2024

- Team project for the CS233 Introduction to Machine Learning course in EPFL. Implemented ML architectures, including CNNs, MLPs, and transformers, to perform classification and regression on the Stanford Dogs and FashionMNIST datasets. [More details on GitHub.](#) [↗](#)
- Tools Used:** Python, PyTorch.

ShapeSense: Real-Time Shape & Range Detector

Dec 2022

- Project for the EE102 Introduction to Digital Circuit Design course at Bilkent University.
- Consists of real-time shape detection using OpenCV library, and distance detection using an ultrasonic sensor and a buzzer. The project was implemented on a BASYS3 board. [More details and video presentation](#) [↗](#)
- Tools Used:** VHDL, Python, BASYS3, Vivado, OpenCV.

Tools and Technologies

Programming Languages: Python, C++, Embedded C, MATLAB, Assembly, VHDL.

Software Technologies: VS Code, Qt, LTSpice, MATLAB, Vivado, Spyder, Jupyter, PyCharm, CSS, Git&Github&Gitlab.

Hardware Technologies: MCU 8051 IDE, ARM Keil MDK, FRDM-KL25Z, BASYS3, Printed Circuit Board (PCB).

Libraries: OpenCV, CVXPY, SciPy, PyTorch, TensorFlow, NumPy, Pillow (PIL Fork).

Skills and Interests

Research Interests: Optimization, Machine Learning, Neural Networks, Signal and Image Processing, Control Systems.

Professional Skills: Problem-Solving, Leadership, Analytical Thinking, Communication, Mathematical Modeling.

Languages: Turkish (Native), English (C1), Spanish (B2), French (A2).

Hobbies: Swimming, Opera, Languages, Poetry, Tutoring, Narrative Writing.

Volunteering and Extracurricular Activities

Social Awareness Projects (TDP)

Sept 2022 – Jan 2024

- Under the Hayal Köprüsü project (HKP), we regularly visited children aged 0-6 who live in Sincan prison with their mothers, and organized activities for them.

Undergraduate Teaching Assistant

Sept 2022 – Jun 2023

- Regularly tutored engineering students in their PHYS102 General Physics II courses for 2 hours per week.
- Helped students in their CS115 Introduction to Programming in Python labs for 4 hours per week.