Başak YALÇINER

Konya/TURKEY
+90 (531) 688 1005
Başak Yalçıner
Başak Yalçıner
bskylcnr.97@hotmail.com

About

- I am Başak Yalçıner. I graduated from the Department of Electrical and Electronics Engineering at KTO Karatay University this year. I am interested in the fields of Artificial Intelligence, Machine Learning, Data, and Image Processing. Throughout my university life, I worked in various jobs and developed projects. I have a strong interest in the field of Artificial Intelligence and aspire to work in this area. I am someone who enjoys research, is inclined towards teamwork, is social, and possesses good communication skills. I am always eager to follow innovations, avidly read, and have a curious nature. I aim to work and further develop myself in the field that I love.

Education

2019–2023 **Bachelor degree**, *Electrical Electronics Engineering(English)*, *KTO Karatay University*

2022–2023 **Bachelor degree**, *Electrical Electronics Engineering(Erasmus+)*, *Utena University of Applied Science*

2018–2019 **Bachelor degre**, *English preparatory class*, *KTO Karatay University*

Languages

- Turkish - Native Language
- English - Upper Intermediate

Experiences

2023 **Utena University of Applied Science**, AI & Computer Vision

- The internship program I participated in with Erasmus+.
- I developed a project on the grouping of growth periods and harvest times of lettuce plants in a hydroponic farming system using the Gaussian Mixture Model (GMM) algorithm.

2022–2023 **Konya City Technology Center**, AI & ML

- Here, I worked as an Artificial Intelligence team leader to develop smart city projects. In the company where we aimed to find intelligent solutions to urban issues in the city of Konya, I, along with my team members, developed software projects in response to requests from the municipality to our company.

2020–2022 **Konya Science Center**, Project Developer and Mentor

- I worked as a team leader in the Project Development and Education section of Konya Science Center. Here, I developed exhibition devices and festival projects for the Science Center and provided software and artificial intelligence training from elementary school to university levels.

2022 **YONGATEK, Microelectronics**, Intership | AI & Computer Vision

- I completed my first summer internship at Yongatek Microelectronics company. In this company that collaborates with defense industry firms, I worked on the Deep Estimation project within the Software unit.

2020–2021 **Author and Editor**, Mert Mechatronics

- I worked as an online article writer and social media manager. During this time, I wrote various articles in the fields of software, technology, and engineering.

2019–2020 **Assistant Student**, KTO Karatay University

- I worked as a student intern under the supervision of our university's Electrical and Electronics Engineering Department Chair. During this time, I conducted one year of research with my mentor on Deep Learning.

Volunteer Work

2022–2023 **Core Member**, Global AI Hub

- Global AI Hub is one of the largest AI education platforms in the world. I am working as a mentor here to increase awareness in the field of AI.

2021 **Software Team Leader|| Engineering and Project Society**

- KaraRov-Teknofest Underwater Drone Project
- I worked on image processing and tool software.

2019 **Member of The Management Board**

- Teknofest-Efficiency Challenge Project
- I worked in the motor driver team and designed a motor driver.

Projects

2023 **Determination of the Area Index of Lettuce Leaves with a Monocular Camera**

- The internship program I participated in with Erasmus+. I worked on the determination of the area index of lettuce leaves with a monocular camera. I developed the project software using Python. I utilized Numpy, Pandas, Matplotlib, Scikit-learn, and OpenCV libraries in the project. I developed a project on the grouping of growth periods and harvest times of lettuce plants in a hydroponic farming system using the YOLOV4 and Gaussian Mixture Model (GMM) algorithm.

2023 **Earthquake Warning Project**

- This project is a smart city project that will enable the communication of rescue teams and citizens under the rubble after the earthquake disaster in our country. This project is currently under development. It will identify the places of the citizens under the debris by marking on the map with the data we receive from Wifi, Bluetooth and GPS, and will also have an interface design that will indicate their health status and will determine the priority and working order for the teams in case of emergency response.

2023 **Autonomous Enemy Repellent**

- The Autonomous Enemy Repellent project is a project that follows the detected enemy with algorithms such as enemy detection, object-human tracking, distance detection and depth detection with the data coming from the camera, focusing on the target with the incoming voice command, and destroying and warning according to the incoming command. The project consists of two parts as electronic design and software. While the software part works for the above algorithms, the electrical part includes the parts of the weapon moving with the data from the camera and automatic firing. The project utilizes the Python programming language and is implemented with the YOLOv4 object detection algorithm. The communication between the computer and the system is established using the UART communication protocol.

2023 **Movement Memorizing Robot**

- 6-axis robot arm. It can be controlled on the computer application. It has a control remote. Can learn and repeat at least 4 movements. Learning robot arm using Raspberry Pi operating system.

2022 **Deep Estimation with Monocular Camera**

- In this project, I worked on the distance detection algorithm with a monoculer camera. I used the Python programming language. I have used tensorflow, opencv, keras, midas, numpy, pandas, mediapipe, pysimpleGUI libraries.

2021 **Autonomous Agriculture Project with RF**

- In this project, I developed a smart hydroponic farming system that can be remotely controlled based on data from sensors using RF communication protocol. The project is designed to operate with both Arduino and Raspberry Pi operating systems, providing versatility. With this system, users can control the system even when they are 10 km away. The goal of this project is to create a system that will facilitate the work of those in the agriculture sector.

2020 **Autonomous Vehicle Project**

- In this project, it was developed using the Raspberry Pi operating system. The intended autonomous movement of the robot, along with the obstacle avoidance method using sensors, is mapped in memory using the matrix method applied to the area. Subsequently, the robot placed inside the maze determines its position and direction, calculates the exit path from the maze using the BAYES algorithm, and then proceeds to the exit without colliding with obstacles.

You can check my all projects on Github

- **Link**

Articles

- DETERMINATION OF THE AREA INDEX OF LETTUCE LEAVES WITH A MONOCULAR CAMERA-**Link**
- AUTONOMOUS HYDROPONIC FARMING SYSTEM AND LETTUCE GROWING-**Link**

Computer Programs Knowledge

- Raspberry Pi
- Proteus
- MS Office
- PIC
- Micro:bit
- Arduino
- EasyEda
- Microsoft Windows
- NVIDIA Jetson
- LEGO EV3

Programming

- Python
- C, C++
- SQL
- Matlab
- Assembly
- CCS-C
- Latex

Certificates

- Supervised Machine Learning | STANFORD -Certificate Link
- Building Video AI Applications at the Edge on Jetson Nano -Certificate Link
- Introduction to Python - Certificate Link
- ASELSAN future of water competition participation certificate - Certificate Link

- AI Business School Introduction the Machine Learning Certificate - Certificate Link
- Neural Networks and Deep Learning Certificate -Certificate Link
- IBM Introduction to Artifical Intelligence -Certificate Link
- AI Business School Introduction to Python Certificate Certificate Link
- Global AI Hub The First Step to Artificial Intelligence Certificate - Certificate Link
- Global AI Hub Data Visualization Certificate - Certificate Link
- UDEMY Computer Vision: Object Recognition with YOLOv4 Certificate - Certificate Link

Hobbies

- Cartoon drawing
- FPS Game
- Ukulele

Other İnformations

- No travel restrictions.
- B driver licence

References

Dr. Laimonas Kairiukstis
UTENA University of Applied Science
kairiukstis.laimonas@gmail.com