Bilal Kabas

CONTACT
INFORMATION

Kayseri, Turkey
Email: bilalkabas@hotmail.com

Web: bilalkabas.github.io
GitHub, ResearchGate, LinkedIn

EDUCATION

Abdullah Gül University
B.Sc., Electrical-Electronics Engineering,
GPA: 3.96, Rank: 1/30

Kayseri, Turkey
Sep 2017 - Present

WORK
EXPERIENCE

Abdullah Gül University - Robotics Laboratory
Undergraduate Researcher (Supervisor: Samet Guler)

Kayseri, Turkey
Feb 2020 - Present

Development of Autonomous Quadcopter for the 5th International
UAV Competition, by TUBITAK

May 2020 - Sep 2020

- Developed decision-making algorithms
- Developed a real-time object detection algorithm
- Designed task-specific mechanisms using a CAD software

RESEARCH &
PROJECTS

**Capstone: Design and Implementation of Deep Learning
Based Localization Algorithms for Drones**

Jan 2021 - Present

- Exploring object detection algorithms
- Implementing YOLO and SSD on Jetson Nano

**Optimization of QPSK-based Digital Communication
Systems Using CAE Compression and CNN Denoising**

Dec 2020 - Feb 2021

- **Techs:** Keras, Google Colab, LabVIEW, USRP
- Designed CAE compressor, ResNet classifier and CNN denoiser
- Implemented QPSK modulation and demodulation in LabVIEW
- Available on GitHub and ResearchGate

**PID Controller Optimization for Low-cost Line Follower
Robots**

Dec 2020 - Feb 2021

- **Techs:** C, STM32
- Developed an optimized PID controller for line tracking
- Available on ResearchGate and GitHub

Comparative Analysis of Full Adder Cells

Mar 2020 - Apr 2020

- **Techs:** LTSpice, Proteus
- Adapted and simulated circuits in LTSpice and Proteus
- Analyzed design differences and performances of circuits
- Available on ResearchGate

ECG Signal Acquisition and Data Processing

Oct 2019 - Jan 2020

- **Techs:** MATLAB, Signal Processing Toolbox, Proteus
- Implemented real-time FFT and filtering algorithms
- Developed R-peak detection algorithm
- Integrated R-R tachogram and PSD analysis tools
- Developed desktop application using MATLAB App Designer
- Available on GitHub

Real-time Data Acquisition in MATLAB (Mini Project)   Sep 2019 - Oct 2019

- **Techs:** MATLAB, Arduino
- Developed real-time control algorithms based on sensor data
- Developed desktop application using MATLAB App Designer
- Available on [GitHub](#)

Real-time Q&A Platform for Coders: codon.io   Jul 2019 - Oct 2019

- **Techs:** Python, Flask, MySQL, Socket.io
- Constructed tables and relationships in database
- Integrated Socket.io enabling real-time messaging
- Available on [GitHub](#)

COMPUTER
SKILLS

Languages	:	MATLAB, Python (intermediate), JavaScript, C (intermediate), VHDL (beginner)
Softwares	:	Simulink, LabVIEW, LTSpice, PSpice, Proteus, Solidworks, Vivado
Hardwares	:	NVIDIA Jetson Nano, Pixhawk, STM32, Basys 3 Artix-7 FPGA, Raspberry Pi, Arduino
Libraries	:	Tensorflow (beginner), Keras, OpenCV, ROS (framework), DroneKit Flask
Platforms	:	Windows, Ubuntu
Database	:	MySQL
Web	:	HTML, CSS, Laravel, Node.js (beginner)

VOLUNTEERING

nadirhastalik.org   Kayseri, Turkey
Web Developer   Jul 2018 - Jun 2019

MEMBERSHIP

AGU IEEE Student Branch   Kayseri, Turkey
Member   Oct 2019 - Present

LANGUAGES

English, Advanced
Turkish, Native