Oguzhan DOGAN

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Career Profile

Teaching Assistant in Mechanical Engineering/Research Assistant in research on data science and AI applications. Worked on various research projects, funded by several companies including BOSCH, SAUERESSIG. Author and co-author of several research articles published on various international journals.

Main research interests and core competencies include wireless power and data transmission, embedded systems, autonomous navigation on drones, computer vision, image processing on navigation problems, swarm intelligence.

Professional Experience

Sep.2020-May.2021	SAUERESSIG - **Researcher** » During the project I developed a STM32 based, bluetooth capable, low energy consumption, high speed dataloggers for the company. Sensor and component selection, multi layer PCB design and algorithm coding for the system were carried out
Apr. 2019-(Present)	Izmir Institute of Technology - Department of Mechanical Engineering **Research and Teaching Assistant**
Oct.2018-Sep.2019	BOSCH, **Researcher**, » Developing the sensor to determine the position of fuel injector
July.-Aug.2013	Grundig Intermedia Gmbh, R&D Department, Nurnberg, Germany **Electrical-Electronics Engineering Internship**, » Study on working principle of television and each peripherals used in television system. Also simulating of Flyback based topology in SMPS. » Performing verification tests based on dedicated specifications.
Aug.-Sep.2012	Dokuz Eylul University, Biomedical Laboratory **Electrical-Electronics Engineering Internship**, » Working on Biopac MP30 device software and hardware.

Education

2017-2020	**Master of Science** in Mechanical Engineering (**CGPA**: 3.71/4.00) Izmir Institute of Technology, Turkey Thesis: "Location Independent Band Specific Inductive Temperature and Revolution Sensing Platform" Supervisor: Prof. Serhan Ozdemir
2009-2015	**Bachelor of Science** in Electrical and Electronics Engineering (**CGPA**: 3.11/4.00) Dokuz Eylul University, Turkey Thesis: "Facial Expression Recognition System" Supervisor: Assoc. Prof. Dr. Damla Kuntalp

Projects

1. **4D CNC Router Design**
   (1st place of Interdisciplinary Project Competition at Dokuz Eyluul University – supported by The Scientific and Technological Research Council of Turkey (TUBITAK))

   »Developing the software system that controls the CNC Router by using computer. The software system is developed by using MSP430 Launchpad (Texas Instruments Microcontroller).

2. **Sign Language Translation System**
   » Developing the software, which is used to translate the signs to letters from the human's hand's image, by using MATLAB and Artificial Neural Network.

3. **Heart Rate Monitoring System** (1st place of Project Competition at Engineering Design Class)
   »Design the system which includes low and high pass filters, IR Led and LED display. By using IR Led, the blood density is measured from the finger and the filters are used to reduce the noises on the signal. By using the counter circuit, the difference of blood densities on finger are measured and it is shown on LED display screen.

4. **Smart Car** (2nd place of Project Competition at Fundamentals Robotics Class)
   » Developing the Software and Hardware system of the smart car by using Raspberry Pi. The Smart car follows traffic lights (stops at red, moves slow at yellow and gets back to normal when signal is clear), avoids the obstacles which are appeared in front of the car and detects the edge of platform where the car moves on.

Certifications

1. **IBM Applied AI Specialization**
   » Issued Feb.2021, Credential ID: ZKU8Y385FU9C

2. **Python for Data Science and AI**
   »IBM issued on Feb.2021, Credential ID: WB7YFN5AAMYT

Patents

1. **"DÖNER MİL DEVİR ÖLÇÜMÜNE YÖNELİK BİR YÖNTEM VE BİR TERTİBAT"**
   »Patent Application No: 2020/09847 (Status: Pending)
   This patent is a novel method to measure rotational speed of the shafts without using any sensors or modules.

Skills

Software Experience	MATLAB, Simulink, Solidworks, Linux, Microsoft Office, LaTeX, Python, C++, C, Proteus, Eagle PCB Design,
Languages	Turkish (Mother tongue), English (Advanced), German (Intermediate)

Refereed Journal Publications

1. **Dogan, O.** ,Ozdemir, S. (2020), "DEVELOPMENT OF INDUCTIVE POWER TRANSFER SYSTEM USING CLASS-D POWER AMPLIFIER", IJIERT - International Journal of Innovations in Engineering Research and Technology, Volume 7, Issue 8, ISSN : 2394-3696, Page No. 63-68

2. Abtulgalip Karabulut, **Oguzhan Dogan**, Serhan Ozdemir,(2020). Designing and Analysis of an Optimal Capacitive Power System Using Class-E Power Amplifier. SSRG International Journal of Mechanical Engineering 7(3), 5-10.

3. **Dogan, O**., Akbasak, S., Tanriyapisi O.M., Kosun, C., Ozdemir, S. (2018) Clustering and Analysis of Headway and Speed Data of an Industrial Zone Traffic Flow. Journal of Scientific and Engineering Research, 2018, 5(8):75-82

Conference Proceedings

1. **Dogan, O**., Ozdemir, S., "A Review of Wireless Power Transmission in the Applications" 5th International Mediterranean Science and Engineering Congress (IMSEC), Antalya, Turkey, October 21-23, 2020

2. **Dogan, O**., Ozdemir, S., "An Overview of Power Amplifiers" 5th International Mediterranean Science and Engineering Congress (IMSEC), Antalya, Turkey, October 21-23, 2020

Links

1. **Researchgate**
2. **Linkedin**
3. **Github**

Reference

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