

# ÖĞÜZHAN BAŞER

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## EDUCATION

### The University of Texas at Austin

Ph.D. in Electrical & Computer Engineering.

2022 - Present  
Austin, TX/USA

### Boğaziçi University

B.Sc. in Electrical & Electronics Engineering.

2017 - 2022  
Istanbul, Turkey

## HONORS AWARDS

- Ranked **40th** among 2.2 million students taking the Turkish university entrance exam.
- Awarded with Merit Scholarship of Turkish Presidency.

## PUBLICATIONS

- Baser, O., Yavuz, M., Ugurlu, K., Onat, F., Demirel, B. U. (2022). **Automatic detection of the spike-and-wave discharges in absence epilepsy for humans and rats using deep learning.** *Biomedical Signal Processing and Control*, 76, 103726.
- Ararat, K., Altan, O., Serbest, S., Baser, O., Dumanli, S. (2020). **A Biodegradable Implant Antenna Detecting Post-Surgical Infection.** In *2020 14th European Conference on Antennas and Propagation (EuCAP)* (pp. 1-4). IEEE.

## RESEARCH EXPERIENCE

### Bogazici University, BUSIM: Center for Signal and Image Processing

Privacy Preserving Machine Learning for Speech Recognition Systems

Supervisor: Prof. Murat Saraclar

Oct 2021 - Jun 2022

Istanbul, Turkey

### University of California Irvine, Embedded & Cyber-Physical Systems Laboratory

Machine Learning in Embedded & Cyber-Physical Systems

Supervisor: Berken Demirel & Prof. Mohammad Abdullah Al-Faruque

Mar - Sep 2021

Irvine, California, USA

### Bogazici University Antenna Research and Propagation Laboratory

AkIm/SImpliFy-B: Smart Orthopaedic Hip Implant Fighting Antimicrobial Resistant Bacteria

Supervisor: Prof. Sema Dumanli Partner: Kivanc Ararat

Jun 2019 - Feb 2020

Istanbul, Turkey

### Bogazici University Antenna Research and Propagation Laboratory

FRagRAnt: Frequency and Radiation Pattern Reconfigurable Antennas

Supervisor: Prof. Sema Dumanli Partner: Z. Pelin Yildirim

Feb - Sep 2019

Istanbul, Turkey

## WORK EXPERIENCE

### Decentralized Computing R&D Engineer (STAR) at SESTEK

Tasks: Cloud/Fog/Edge Computing, Decentralized Artificial Intelligence Systems  
Privacy Aware Machine Learning

Jan - Jun 2022

Istanbul, Turkey

### Machine Learning R&D Engineer at SESTEK

Tasks: audio signal processing, speech recognition system design and optimization  
by utilizing supervised learning models such as Wave-Net, Squeeze-Net, Alex-Net,  
applying latest research findings to industry, embedded algorithm optimization

Jul - Sep 2020

Istanbul, Turkey

## PROJECTS

### Music Genre Prediction/Classification Software

An application utilizing linear pattern recognition models for music genre classification.

Oct - Dec 2021

### Realization and Evaluation of Communication Systems on Arduino Board

Communication systems with DSB-AM, FM, DTMF, BPSK, 4-PAM, 8-PSK, and 16-QAM were set up. System performances were evaluated against AWGN with different SNRs.

Sep - Dec 2021

## Permittivity Detector Design

Apr - Jun 2019

A MATLAB program was coded to get permittivity values of biological phantoms by iterating algorithm using air/water permittivity and ambient temperature. A probe was made for the vector network analyzer to measure permittivity of liquids.

## VOLUNTEER EXPERIENCE & LEADERSHIP ACTIVITIES

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|---|---------------------|
| • The Research Center on Asylum and Migration<br><i>Mathematics Teacher</i>   | Sep 2021 - Apr 2022 |
| • Electrical and Electronics Engineering Department, Bogazici University<br><i>Probability Course, Teaching Assistant</i> | Sep 2021 - Jan 2022 |
| • Electrical and Electronics Student Representative Board, Bogazici University<br><i>Volunteer Ambassador</i>             | Feb 2020 - Present  |
| • Electrical and Electronics Student Representative Board, Bogazici University<br><i>Student Mentor</i>                   | Sep 2019 - Present  |
| • Mithat Alam Film Center, Bogazici University<br><i>Executive Board Member</i>   | Oct 2018 - Present  |
| • Work & Travel Experience, Cottonwood Cove at LasVegas, Nevada, USA<br><i>J1 - Fuel Personnel</i>                        | Jun - Aug 2018      |
| • MECZUP (The Lunatic), Film, Team Tiryaki<br><i>Director, Scriptwriter</i>   | Feb - May 2018      |
| • Scouting and Guiding Federation of Turkey<br><i>Scout</i>   | Apr 2014 - May 2015 |
| • Karaçam Rock Band<br><i>Lead Guitarist</i>  | Feb - Dec 2014      |

## SKILLS, ACTIVITIES INTERESTS

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| • <i>Skills:</i><br>C++, Java, Matlab-Simulink, Python, Tensorflow<br>OpenCV(C++), Artificial Deep Neural Networks,<br>Machine Learning, Keras, OrCAD / PSpice, VHDL,<br>Linux, Arduino, LaTeX, Adobe Photoshop, Adobe<br>Premiere Pro, Adobe Lightroom, Adobe Illustrator.        | • <i>Languages:</i><br>Native in Turkish<br>Fluent in English (TOEFL iBT Score: <b>106/120</b> )<br>Elementary in German   |
| • <i>Interests:</i><br>AI, Network Science, Network Security, Privacy,<br>Digital Signal Processing, Decentralized Computing,<br>Cryptography, Cybersecurity, Blockchain, Crypto-<br>art, Computer Vision, Speech/Music Processing,<br>Cognitive Science, Philosophy, Film Making. | • <i>Other Extracurriculars:</i><br>Fitness, Climbing, WWF, Inzva AI Community,<br>Hiking, Riding Motorcycle, Playing Guitar & Piano,<br>Art and Technology writer of "cizgisizdefter.org",<br>Photography |