

# Batuhan Bal

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## EDUCATION

### Middle East Technical University

*Bachelor of Computer Engineering*

Ankara, Turkey

*Expected July 2023*

- CGPA: 3.64
- Minors in Mathematics (CPGA: 3.69)

## EXPERIENCE

### Undergraduate Researcher

*Affective Intelligence and Robotics Lab (AFAR)*

July 2021 – Present

*University of Cambridge, Department of Computer Science, UK*

#### *Project 2 Description:*

*February 2022 - Present*

- Generative Adversarial Network
- Facial Reaction Prediction
- Work on project which aims to develop multi-modal network whose input is the audio-visual non-verbal cues displayed by the conversational partner (i.e., the speaker), and the output is the target subject's (i.e., the listener) facial reaction.

#### *Project 1 Description:*

*July 2021 - February 2022*

- Facial Action Unit Recognition
- Self-Supervised Learning
- Work on project which aims to detect facial action units using Capsule Networks.
- Implement self-supervised learning methods in TensorFlow to increase the performance of model.

### Research Intern

*KOVAN Research Lab*

July 2020 – July 2021

*Middle East Technical University, Turkey*

#### *Project Description:*

- 3D Object Recognition
- Reinforcement Learning
- Work on project which aims to learn automated assembly plan with just the 3D target object provided.
- Create a reward function to use in deep reinforcement learning algorithm by comparing two point cloud object using Iterative Closest Point algorithm.

## TECHNICAL SKILLS

Languages	Programming Languages	Libraries	Developer Tools
<ul style="list-style-type: none"><li>• Turkish (Native)</li><li>• English (Advanced)</li><li>• Russian (Elementary)</li><li>• Japanese (Elementary)</li></ul>	<ul style="list-style-type: none"><li>• Python</li><li>• C/C++</li><li>• MATLAB</li></ul>	<ul style="list-style-type: none"><li>• TensorFlow</li><li>• PyTorch</li><li>• Numpy</li><li>• Pandas</li></ul>	<ul style="list-style-type: none"><li>• Github / GitLab</li></ul>

## EXTRACURRICULAR ACTIVITIES

### Community Head

*METU Bridge Club*

October 2019 - November 2021

### Club Member

*METU Communication Society*

October 2020 – Present

- Voluntary participation in aid provided to village schools