

# Onur Berk Töre

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## Education

- 2019 **M.Sc. in Computer Engineering**, *Koç University*.  
Autonomous, Learning and Interactive Agents Research Laboratory
- 2014-2019 **B.Sc. in Computer Engineering**, *Yeditepe University*, 3.35/4.0.  
Robotics and Intelligent Systems Laboratory

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## Research & Development Experience

- 2019 **Researcher**, *ALIVE Laboratory, Koç University*.
- 2018 **Undergraduate Researcher**, *Robotics & Mechatronics Laboratory, Koç University*.
  - Worked on the electrovibration effect on a haptic touchscreen interface and investigated the geometric transformations of the fingerprint under this effect.
  - Showed the change in the shear strain values of fingerprint under the electrovibration effect.
- 2017 **Software Developer**, *Yeditepe University*.  
Erasmus+ KA203 Strategic Partnership Project  
Title: Timeline Travel, An Alternative Tool for Architectural History Learning and Teaching  
More Info: [timelinetravelproject.gantep.edu.tr](http://timelinetravelproject.gantep.edu.tr)
  - Core developer of the team, worked together with a Ph.D. student to build TTravel tool, an interactive 2D dynamic map creation plugin designed for web.
- 2016 **Undergraduate Researcher**, *Robotics & Intelligent Systems Lab., Yeditepe University*.
  - Modify 2D physics engine.
  - Implemented potential field and wavefront path finding algorithms in C++.
  - Applied haptic rendering for rigid body simulation on Geomagic Touch devices.
  - Performed teleoperation for haptic devices via connection over the network.

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## Teaching Experience

- 2018-2020 **Teaching Assistant**, *Koç University*.
  - Introduction to Artificial Intelligence, (COMP341)
  - Online Data Science Certificate Program
- 2016-2017 **Undergraduate Lab Assistant**, *Yeditepe University*.
  - Data Structures (CSE 211), C++
  - Fundamentals of Computer Programming (CSE 114), C

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## Undergraduate Projects

### Summer Project.

- Markerless gesture control of a mobile robot, C++, ROS, Ubuntu, Leap Motion SDK.
- Real time person tracking and following, OpenCV, KFC algorithm.
- Line follower mobile robot via IR and buffer sensors.

### Course Projects.

- **Operating Systems Design:** Modification to Linux 2.4 kernel scheduler and performance analysis of the new scheduler, C.
- **Introduction to Artificial Intelligence:** Implementation of minimax algorithm with alpha beta pruning to checkers-like game, C++.
- **Computer Security:** Implementation of authentication, confidentiality and compression services to file transfer application, Java.
- **Data Communications and Computer Networks:** Transport layer anonymization of video broadcast application, Java, C.
- **Programming Languages:** JSON to XML converter, Lex, Yacc, C.
- **Data Structures:** Huffman algorithm for txt files, C++.
- **Systems Programming:** M6800 Assembly interpreter, C.
- **Software Testing:** Applied Code Inspection, Design by Contract analysis, Code-coverage tests, Equivalence tests and Unit tests on a Java class.

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## Languages

- **Turkish:** Native
- **English:** C1 CEFR (TOEFL: 103/120, IELTS: 7.5/9.0)

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## Technologies

- **Languages:** C++, C, Java, Python, MySQL, Matlab, Javascript, PHP
- **Software:** ROS, Gazebo, Weka, OpenCV, OpenHaptics, OpenInventor, Visjs, Leaflet, LeapMotion SDK, SUMO, Boost, Bootstrap