

## Mahmut Demir

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- OBJECTIVE** I have a long standing passion for Robotics with proven experience. My knowledge in the field relies not only on the academic studies conducted in several prominent robotics research laboratories but also on the professional experience of working in a R&D company which built the first Tactical UAV in Turkey as well as on the hands-on experience acquired through both individual and team projects completed in our makerspace of which I am the co-founder of. Upon completion of my M.S. degree, I would like to continue as a PhD student in Robotics and Computer Vision areas. I am a Green Card holder and permanent resident in US.
- EDUCATION**
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| <i>M.Sc. in Electrical Engineering,</i><br><b>Bogazici University</b> , Istanbul, TURKEY | 2014 - Exp.2016 |
| <i>Exchange Student,</i><br><b>Waseda University</b> , Tokyo, JAPAN                      | 2010 - 2011     |
| <i>B.Sc. in Electrical Engineering,</i><br><b>Bogazici University</b> , Istanbul, TURKEY | 2006 - 2012     |
- PUBLICATIONS** (Submitted) Mahmut Demir, H. Isil Bozma. **"Place Detection & Segments Summary Graphs."** International Conference on Robotics and Automation (ICRA), 2016
- Mahmut Demir, H. Isil Bozma. **"Video Summarization via Segments Summary Graphs."** Workshop on the Video Summarization, International Conference on Computer Vision (ICCV), 2015
- (Best Paper Award) Mahmut Demir, H. Isil Bozma. **"Yer Sezimleme ve Ozet Bolut Cizgeleri."** Turkiye Robotbilim Konferansı (TORK), 2015
- RESEARCH EXPERIENCE**
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|---|---------------------|
| <i>Researcher</i><br>Cognitive Robotics Laboratory, <b>Sabanci University</b> , Istanbul, TURKEY  | Sep.2012 - Mar.2013 |
| <ul style="list-style-type: none"><li>Redesigned ROS navigation package to utilize holonomic motion capability of KUKA youBot robots.</li><li>Developed an application to recognize shiny surfaced kitchen utensils.</li></ul>  |                     |
| <i>Undergraduate Researcher</i><br>Intelligent Systems Lab, <b>Bogazici University</b> , Istanbul, TURKEY   | 2008 - 2012         |
| <ul style="list-style-type: none"><li>Undergraduate thesis: "Multi Robot Exploration and Mapping." Constructed 5 small scale robots capable of vision based navigation, tele-operation and multi-robot communication.</li></ul> |                     |

	<p><i>Undergraduate Researcher</i> <span style="float: right;">Spring 2011</span>  Takanishi Humanoid Robotics Lab, <b>Waseda University</b>, Tokyo, JAPAN</p> <ul style="list-style-type: none"> <li>Redesigned HMM based hand gesture recognition algorithm and developed QT based interface for gesture training.</li> </ul>
	<p><i>Undergraduate Researcher</i> <span style="float: right;">Summer 2010</span>  CMU Biorobotics Lab, <b>Carnegie Mellon University</b>, Pittsburgh, PA</p> <ul style="list-style-type: none"> <li>Implemented an optical-flow based approach to extract egomotion information of the mobile robot. Worked under the supervision of Prof. Howie Choset</li> </ul>
<b>WORK EXPERIENCE</b>	<p><i>Research &amp; Teaching Assistant</i> <span style="float: right;">Sep.2014 - Present</span>  Bogazici University, Istanbul, TURKEY</p> <ul style="list-style-type: none"> <li>Master's thesis: "Vision Based Place Detection and Recognition"</li> <li>T.A. for selected courses: RobotControl, Artificial Intelligence, Numerical tools for EE Students, Energy Conversion and Electric Machines</li> </ul> <p><i>UAV Software Engineer</i> <span style="float: right;">May.2013 - Aug.2014</span>  Baykar Aerospace Company, Istanbul, TURKEY</p> <ul style="list-style-type: none"> <li>The company, in which I worked as a part of the software team, built the first and most advanced Unmanned Aircraft in Turkey and currently being used by Turkish Armed Forces.</li> <li>My main contributions: Embedded programming for safety critical applications. Designed and programmed the smart power control, smart battery charge and monitor units. Wrote an embedded program and simulation software for controlling the aircraft motor for normal operation and in case of emergency situations.</li> </ul> <p><i>Co-Founder</i> <span style="float: right;">Feb.2012 - Jan.2014</span>  Base-Istanbul Makerspace, Istanbul, TURKEY</p> <ul style="list-style-type: none"> <li>Founded the first community-operated co-working space located in Istanbul, Turkey. Lead the community there to create and collaborate on technology, DIY and start-up projects by means of organizing several hackathons, workshops and lectures</li> </ul> <p><i>Software Developer</i> <span style="float: right;">Feb.2012 - Oct.2012</span>  AveaLabs, Istanbul, TURKEY</p> <ul style="list-style-type: none"> <li>Developed an EKF based traffic estimation algorithm, generates a traffic report based on crowdsourced GPS data of the mobile phone users.</li> <li>Created "the SmartBox", a raspberry powered gadget, that connects internet and displays live feeds, e-mails and notifications.</li> </ul>
<b>SKILLS</b>	<p><i>Languages: Turkish (Native), English (Fluent), Japanese (Intermediate)</i>  <i>Programming Languages: C, C++, Python, Java, Matlab</i>  <i>Programming Libraries: OpenCV, ROS, Android</i>  <i>Safety Critical Embedded Programming</i></p>
<b>AWARDS</b>	<p>2015, Best Paper award in National Robotics Conference, TORK  2015, Turkish Government Graduate Scholarship Awardee  2006, Ranked 6<sup>th</sup> out of 1.5 Million Students at 2006 University Entrance Exam</p>
<b>EXTRA-CURRICULAR ACTIVITIES</b>	<p>Base-Istanbul Makerspace, <i>Co-Founder, Member</i> <span style="float: right;">Feb.2012 - Jan.2014</span></p>

## REFERENCES

*Bogazici University:* Prof. Isil Bozma • bozma@boun.edu.tr

*Baykar Aerospace Company:* CTO, Selcuk Bayraktar • selcuk@baykarmakina.com

*Sabanci University:* Prof. Mustafa Unel • munel@sabanciuniv.edu

*Carnegie Mellon University:* Prof. Howie Choset • choset@ri.cmu.edu

*Waseda University:* Prof. Atsuo Takanishi • takanisi@waseda.jp