

Mahmut Demir

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SUMMARY

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 hacker-space of which I am the co-founder. Upon completion of my M.S. degree in Robotics with expected graduation in Jan, 2016, I would like to specialize in Autonomous Driving Systems. I am a permanent resident and authorized to work in the U.S.

EDUCATION

BOGAZICI UNIVERSITY

M.Sc. IN ELECTRICAL ENG.

Exp. Jan 2016 | Istanbul, Turkey

B.Sc. IN ELECTRICAL ENG.

2006-2012 | Istanbul, Turkey

GPA: 3.20 / 4.0

RELATED COURSEWORK

Machine Vision • 3D Vision
Pattern Recog. • Neural Nets
Bayesian Statistics & M.L.
Auton. Robots • Robot Control

SKILLS

PROGRAMMING

OpenCV • ROS • Android
Safety Crit. Embedded Prog.
C/C++ • Java • Python • Matlab

LANGUAGE

Turkish | Native
English | Fluent
Japanese | Intermediate

AWARDS

RANKED 6th / 1.5 MILLION
at 2006 University Ent. Exam

LINKS

Web:// mahmutdemir.info
Github:// [mdemirst](https://github.com/mdemirst)
LinkedIn:// [mahmutdemir](https://www.linkedin.com/in/mahmutdemir)

EXPERIENCE

BOGAZICI UNIVERSITY | RESEARCH & TEACHING ASSISTANT

Sep.2014 - Present | Istanbul, Turkey

Master's thesis: "Vision Based Place Detection and Recognition"

T.A. for selected courses: RobotControl, Artificial Intelligence, Numerical tools for EE Students, Energy Conversion and Electric Machines

BAYKAR AEROSPACE COMPANY | UAV SOFTWARE ENGINEER

May.2013 - Aug.2014 | baykarmakina.com • Istanbul, Turkey

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. 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.

BASE-ISTANBUL MAKERSPACE | Co-FOUNDER

Feb.2012 - Jan.2014 | Istanbul, Turkey

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.

AVEALABS | SOFTWARE DEVELOPER

Feb.2012 - Oct.2012 | Istanbul, Turkey

Developed an EKF based traffic estimation algorithm, generates a traffic report based on crowdsourced GPS data of the mobile phone users. Created "the SmartBox", a raspberry powered gadget, that connects internet and displays live feeds, e-mails and notifications.

RESEARCH

INTELLIGENT SYSTEMS LAB | RESEARCHER

2008 - 2012 | Bogazici University • Istanbul, Turkey

Undergraduate thesis: "Multi Robot Exploration and Mapping." Constructed 5 small scale robots capable of vision based navigation, tele-operation and multi-robot communication.

COGNITIVE ROBOTICS LAB | RESEARCHER

Sep.2012 - Mar.2013 | Sabanci University • Istanbul, Turkey

Redesigned ROS navigation package to utilize holonomic motion capability of KUKA youBot robots. Developed an application to recognize shiny surfaced kitchen utensils.

TAKANISHI HUMANOID ROBOTICS LAB | UNDERGRAD RESEARCHER

Spring 2011 | Waseda University • Tokyo, JAPAN

Redesigned HMM based hand gesture recognition algorithm and developed QT based interface for gesture training.

CMU BIOROBOTICS LAB | UNDERGRAD RESEARCHER

Summer 2010 | CMU Robotics Institute • Pittsburgh, PA

Implemented an optical-flow based approach to extract egomotion information of the mobile robot. Worked under the supervision of Prof Howie Choset

PUBLICATIONS

- (Submitted) MahmutDemir, H. Isil Bozma. "Place Detection & Segments Summary Graphs." Int. Conf. on Robotics and Automation (ICRA), 2016
- Mahmut Demir, H. Isil Bozma. "Video Summarization via Segments Summary Graphs." Workshop on the Video Summarization for Large-scale Analytics, Int. Conf. on Computer Vision (ICCV), 2015
- Mahmut Demir, H. Isil Bozma. "Yer Sezimleme ve Ozet Bolut Cizgeleri." Turkiye Robotbilim Konferansı (TORK), 2015"