



## Birol ÇAPA

### Personal Information

Nationality : Turkish  
Military Service : Completed  
Profession : Embedded Systems

### Work Experience

01.07.2014 - Present Siemens San. ve Tic. AŞ Istanbul  
**Software Development Engineer**

30.12.2010 – 06.11.2013 (Due to Military Obligation)  
Teknotel Elektronik Ltd. Şti Istanbul  
**R&D Engineer**

- Inventory Management Tool (.Net, C#, MSSQL, Entity Framework)
  - Asset Tracking
- Park Master Server Software Design
  - “Online Map” Part of the Server (.Net, C#)
  - “Reporting” Part of the Server (.Net, C#)
- Park Master Circuit Configuration Tool Software Design
  - Configures Park Master Circuits’ IP, Gateway and MAC Addresses (.Net, C#, RS232)
- Park Master Display Software and Hardware Design
  - Gets Server's Commands by using TCP/IP Communication and Drives P20 LED Matrix (STM32, IwIP, SPI, RS232)
- Park Master Totem Software and Hardware Design
  - Gets Server's Commands by using TCP/IP Communication and Drives P10 Full Color LED Matrix (STM32, IwIP, SPI, RS232)
- FRP14 Illuminated Forced Direction Sign
  - Controller Module Software Design – Drives Traffic Signals due to CAN Messages of the Server (STM32, CAN)

2010 (Summer) Siemens San. ve Tic. AŞ Istanbul  
**Intern**

- S7 300/400 CPU Based PLC Programming

2009 (Summer) ASELSAN Ankara  
**Intern**

- Image Processing Based Tracking Algorithms

2008 - 2009 ITU Control and Avionics Laboratory Istanbul  
**Intern**

- Embedded Software and Hardware Design (ATmega16 ve ATmega128)

	2007	ITU Industrial Automation Laboratory	Istanbul
	<b>Intern</b>		
	<ul style="list-style-type: none"> <li>• S7 200 CPU Based PLC Programming</li> </ul>		
<b>Education</b>	2006 - 2011	Istanbul Technical University	Istanbul
	<b>Control Engineering Bachelor of Science – 3.55 / 4.00</b>		
	<ul style="list-style-type: none"> <li>• 4 Term High Honor List</li> <li>• 4 Term Honor List</li> </ul>		
	2008 - 2012	Istanbul Technical University	Istanbul
	<b>Mechanical Engineering (Minor) – 2.91 / 4.00</b>		
<b>Programming Languages</b>	<ul style="list-style-type: none"> <li>• C, C#, C++, Java, HTML, CSS, SQL</li> <li>• Siemens Simatic S7-200, Siemens Simatic S7-300/400</li> <li>• Experienced MCU: STM32, STM8, PIC 16F, ATmega 16, ATmega128</li> <li>• Real-Time Operating Systems: Pavos, <math>\mu</math>C/OS-II</li> </ul>		
<b>IDEs</b>	<ul style="list-style-type: none"> <li>• .NET, Keil uVision, MPLAB, OpenCV, AvrStudio, Visual Studio, Eclipse</li> </ul>		
<b>Simulation and Computational Programs</b>	<ul style="list-style-type: none"> <li>• MATLAB, Simulink, Mathematica, MathCAD, Mentor Graphics, Altium Designer, Protel99, Proteus ISIS-ARES, PSIM, DipTrace, CircuitMaker, ExpressPCB</li> </ul>		
<b>Communication Protocols</b>	<ul style="list-style-type: none"> <li>• Ethernet, TCP/IP, RS232, RS485, CAN</li> </ul>		
<b>CAD/CAM</b>	<ul style="list-style-type: none"> <li>• SolidWorks, AutoCAD, VRML</li> </ul>		
<b>Other Programs</b>	<ul style="list-style-type: none"> <li>• MS Office, OpenOffice</li> </ul>		
<b>Operating Systems</b>	<ul style="list-style-type: none"> <li>• Windows XP, Windows Vista, Windows 7, Windows 8, Linux – Ubuntu, Embedded Linux</li> </ul>		
<b>Certificates</b>	<ul style="list-style-type: none"> <li>• KOSGEB “Business Development and Entrepreneurship Training” Certificate - 2012</li> <li>• TÜSSİDE “Business Management and Development Training” Certificate - 2011</li> <li>• Siemens S7 300/400 System 2 Certificate - 2010</li> <li>• Siemens S7 300/400 System 1 Certificate – 2010</li> </ul>		
<b>Projects</b>	<p>Fan and Plate System Control by MATLAB xPC Target (Graduation Project)</p> <ul style="list-style-type: none"> <li>• System Modeling and Simulation, Embedded Software Design, xPC Target Software</li> <li>• PID Control, Fuzzy Modeling and Control</li> <li>• Designing an Experimental Setup that can easily programmed by Simulink</li> </ul>		

#### ITU Industrial Automation Laboratory

- S7-200 Training
- S7-300/400 Training
- SCADA Training

#### ITU Robotic Laboratory

- Introduction to Robotics Unofficial Teaching Assistant
- Making a rich support environment for the course by using: Virtual Reality Toolbox, Matlab and CAD
- Staubli RX160 Robot Arm Analysis

#### ITU Control Laboratory

- Automation and Control of Mitsubishi RV-2A

#### Balancing Robot (2008)

- System Modeling and Simulation, Hardware Design

#### Quadrotor(2008)

- Hardware Design

#### Organizations

- Yeni Düşler Yenilikçi Düşünceler 2011 (Entrepreneurship Competition) – Competitor, Ranked as 2<sup>nd</sup>
- WORLD SKILLS 2009 – Mobil Robotics Competitor
- ITURO 2008 – Competitor, Ranked as 1<sup>st</sup> in Balancing Category
- Istanbul Teknik Üniversitesi Robot Olimpiyatları (ITURO 2007) – Member of Organization Team
- ODTÜ Robot Days 2006, Competitor

#### Awards

- Siemens Bursary
- 4 Term High Honor List and 4 Term Honor List
- ITURO 2008 – Balancing Robot Competitor, Ranked as 1st

#### Memberships of

#### Associations and Clubs

2006-2011	Control and Automation Student Branch	ITU
2006-2008	IEEE Student Branch	ITU
2010-2011	Turkish Traditional Music Student Branch	ITU

#### Foreign Language

English – KPDS (86.25 / 100)

#### Social Interests and Hobbies

History, Emergence of Modern Turkey, Turkish Traditional Music, Truck Games