



# Rafet Ilgin

SENIOR SOFTWARE ENGINEER

## CONTACT

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- <https://rafetilgin.github.io/>

## PROFILE

Highly motivated, business-minded, results-driven senior software engineer with 17 years of experience in avionics and medical R&D domain. My formal engineering background enables me to work comfortably on the hardware related software development and penetrate into complex problems that requires analytical thinking and data analysis.

I follow best practices and recent development in my field and work according to agile principles (scrum) in V-Model under complex development environments.

## EXPERIENCE

### MEDICAL APPLICATIONS SOFTWARE ENGINEER

VARIAN MEDICAL SYSTEMS | DEC. 2019 -

**Role:** Software Development for medical applications within a group of 6 software developers

- Software Programming with C# in windows environment
- Proton therapy imaging (CBCT and 2D) and position matching applications development (new features and architectural improvements) for clinical workflows and calibration/maintenance
- Installation and maintenance of test environments both hardware and software
- Integration and unit testing
- Automated test infrastructure development
- Requirement review, authoring
- Test case review, authoring and formal test execution
- FMEA review and update

### SENIOR EXPERT TEST SYSTEMS DESIGN & DEVELOPMENT ENGINEER

ASELSAN INC. | FEB. 2016 - DEC. 2019

**Role:** Software Development, System and Hardware Design for automated LRU test systems in a group of 15 software developers

- Software Programming with C/C++ and C# in windows environment
- Bare metal programming with C
- Software development in multithreaded environment for avionic line replacable unit (LRU) test systems
- Automated test equipment (ATE) system (software and hardware) design and lead manufacturing of system
- Regular meetings with external and internal stakeholders, mentoring new team members
- PCB design (resolver signal reader circuit design)
- Avionic units in scope: Inertial navigation systems, Mission computer, Flight control computer, Multi function display, SlipRing

### EXPERT TEST SYSTEMS DESIGN & DEVELOPMENT ENGINEER

ASELSAN INC. | SEPT. 2012 - FEB. 2016

**Role:** Software Development, System Design for automated LRU test systems in a group of 15 software developers

- Software Programming with C/C++ and C# in windows environment
- Automated test equipment (ATE) system (software and hardware) design and lead manufacturing of system
- Regular meetings with internal stakeholders
- Avionic units in scope: Inertial navigation systems, Central Control Computer
- Communication Interfaces: Serial, MIL-STD-1553, ARINC429, CAN, GPIB, ETHERNET

## TEST SYSTEMS DESIGN & DEVELOPMENT ENGINEER

ASELSAN INC. | JULY 2010 - SEPT. 2012

**Role:** Software Development for automated LRU test systems in a group of 10 software developers

- Software Programming with C/C++ in windows environment
- Software development in multithreaded environment for avionic line replacable unit test systems
- Unit testing
- Avionic units in scope: Inertial navigation systems
- UX/UI Design for Automated Test Software
- Communication Interfaces: Serial, MIL-STD-1553, ARINC429, GPIB

## IT SECURITY ENGINEER / SYSTEM ADMIN.

ASELSAN INC. | SEPT. 2007 - JULY 2010

**Role:** IT System Administrator in a group of 10 domain experts

- IT System Administrator for Network Security
- Management of Firewalls, Anti-virus Infrastructure, Wireless Network, Network Switches and SMTP Servers (Windows, Linux)
- Development of scripts to be deployed to network (VBScript, Batch Script)
- Preparation Online Education for End Users (ASP .Net)

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## EDUCATION

### Ph.D. ELECTRICAL and ELECTRONICS ENGINEERING (3.28 / 4.00) - 2015 WITDRAWN

MIDDLE EAST TECHNICAL UNIVERSITY, ANKARA | 2012 - WITHDRAWN 2015

Major: Control Theory & Minor: Power Systems

**Thesis Subject:** Design of Novel Navigation Filters and Conducting their Performance Tests in a Multi UAV System

### M.Sc. ELECTRONIC and COMMUNICATION ENGINEERING (CGPA: 3.64 / 4.00)

CANKAYA UNIVERSITY, ANKARA | 2008 - 2011

**Thesis Subject:** Development of a Combined Air Data and Angle of Attack/Stall Warning Computer

### B.Sc. ELECTRICAL and ELECTRONICS ENGINEERING (CGPA: 2.81 / 4.00)

MIDDLE EAST TECHNICAL UNIVERSITY, ANKARA | 2003 - 2007

**Undergrad Project:** Slalom Robot

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## CERTIFICATES / TRAININGS

Software Architect      [ISAQB CPSAFL Software Architecture](#)

SoftwareCPR IEC 62304      [IEC 62304 and Emerging Standards and FDA Expectations for Medical Device and Health IT Software Training Course](#)

Security Tester      [OPST Professional Security Tester](#)

Microsoft      MS6420: Fundamentals of a Windows Server 2008 Network Infrastructure and Application Platform (08 - 11 JULY 2008)

Microsoft	MS6416: Updating your Active Directory Technology Skills to Windows Server 2008 (03 - 04 JULY 2008)
Microsoft	MS5050: Recovering Messaging Servers and Databases using Microsoft Exchange Server 2007 (26 JUNE 2008)
Microsoft	MS5049: Managing Messaging Security using Microsoft Exchange Server 2007 (25 JUNE 2008)
Microsoft	MS5047: Introduction to Installing and Managing Microsoft Exchange Server 2007 (23 - 24 JUNE 2008)
Microsoft	MS2810: Fundamentals of Network Security (2 NOVEMBER 2007)
BIMEL Network	LAN/WAN properties with their connection techniques (24 - 26 OCTOBER 2007)
METU Technocity	Product Development and Intellectual Property (19 - 21 JUNE 2006)
METU Technocity	Innovation and entrepreneurship (05 - 09 JUNE 2006)

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## COMPUTER SKILLS

<b>Programming</b>	C#, C/C++
<b>Testing Frameworks</b>	MSTest, Moq, Rhino Mocks, CUnit
<b>Operating Systems</b>	Windows, macOS, Linux
<b>Communication Protocols</b>	RS232/422/485, ARINC429, MIL-STD-1553, Modbus, CAN, TCP/IP, UDP, SOAP, SPI, I2C
<b>APIs</b>	SOAP, REST, gRPC
<b>Source Control</b>	Git (Azure DevOps CI/CD), TFVC
<b>Tools</b>	Microsoft Visual Studio, VS Code, LabWindowsCVI, NI TestStand
<b>.NET</b>	WinForms, WPF, WCF
<b>Engineering Tools</b>	Doors (DXL), ClearQuest, Coverity, MATLAB/Octave, VMware, Docker, HPQC, SAP
<b>Database</b>	SQL, NoSQL (Firebase)
<b>Other</b>	WiX Toolset, HTML, CSS, Python, JavaScript, OpenCV, Tesseract OCR

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## ACHIEVEMENTS

METU-Technocity YFYI (New Ideas New Businesses) Contest 2006 - 3rd Team

Turkey University Central Examination (OSS-2002) 389th (Ranking) among ~1.5m candidates

Turkey Academical Personnel Graduate Examination (LES-2006) 376th (Ranking) among ~100k candidates

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## LANGUAGES

<b>Turkish</b>	Native
<b>English</b>	Fluent in spoken and written
<b>German</b>	Intermediate (B1 Zertifikat)