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EMPLOYMENT

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|--|---|----------------------------------|
| Graduate Research Assistant | FIU Cyber-Physical Systems
Security Lab | August 2016 – August 2018 |
| <ul style="list-style-type: none">• Full stack developer for Proviz project, automatic code generation platform for various IoT devices.• Created Wi-Fi(TCP/IP), Bluetooth 2.1, Bluetooth LE network protocols for Proviz project.• Created new programming language, Panther, that can program various IoT devices for Proviz Project.• Designed automatic code generation platform by using Apache Freemarker.• Worked as a lead developer in development of android application project.• Created JAVA Graphical User Interface by using JAVA Swing and FX library.• Developed more secure bootloader for Atmel micro-controller using asymmetric encryption algorithms.• Created secure over the air programming framework for Arduino devices to make firmware distribution process secure.• Created automated penetration software to find vulnerabilities in network using single board computers.• Became internship mentor for 1 high school and 6 undergraduate students to navigate their professional life. | | |
| Software Engineer | Garanti Technology | February 2016 – June 2016 |
| <ul style="list-style-type: none">• Developed automatic code generation software for mobile applications• Worked with mobile application testing frameworks | | |
| Jr. Software Engineer | Valensas Technology Services LLC | June 2014 – August 2015 |
| <ul style="list-style-type: none">• Responsibilities included development of several mobile applications (VDP Mag Android, Hangi Kopru? Android widget), server side applications (NSLogger Linux server application) from beginning to end-user.• Developed Bluetooth Low Energy and iBeacon applications• Developed Apple Watch applications. | | |
| Undergraduate Researcher
Student | ITU Smart Interaction & Mobile
Intelligence Research Lab | February 2013 – May 2014 |
| <ul style="list-style-type: none">• Developed Shooting Marker Android Game by using augmented reality technology and android SDK. | | |
| Part-time Software Engineer
R&D Department | Istanbul Ulasim A.S | June 2013 – February 2014 |
| <ul style="list-style-type: none">• Developed internal document security software, web based token machine monitoring software.• Developed and testing web based wind turbine monitoring software. | | |
| Undergraduate Researcher
Student | ITU Smart Interaction & Mobile
Intelligence Research Lab | January 2013 – May 2013 |
| <ul style="list-style-type: none">• Participated post-graduate computer vision related courses.• Developed color & pattern recognition project for TUBITAK software competition. | | |
| Team Member | ITU Solar Car Team | November 2011 – May 2012 |
| <ul style="list-style-type: none">• Participated development of Can bus solar car team remote monitoring software.• Worked at press and public relations department in order to help their sponsor finding activities. | | |

EDUCATION

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|--|---|----------------------------------|
| Miami, FL, USA | Florida International University | August 2016 – August 2018 |
| <ul style="list-style-type: none">• M.Eng. in Computer Engineering• Graduate Research Assistant at FIU Cyber-Security Systems Lab.• Graduate Coursework: Computer Security; Cyber Security; Software Engineering | | |

Istanbul, Turkey

Istanbul Technical University

September 2011 – January 2016

- B.Eng. in Computer Engineering, January 2016. GPA: 3.52. Rank: 3/104 Top %3; summa cum laude
- English Prep. School ITU January 2012
- Undergraduate Coursework: Computer Security; Software Engineering; Cloud Computing; Artificial Intelligence; Genetic Algorithms; Evolutionary Algorithms.

HIGHLIGHTED PROJECTS

- **CyberGrenade** (2017): CyberGrenade is a defensive cybersecurity framework automating various penetration testing tools to sequentially exploit machines connected to a single local network, all underneath a single application running on a Single-Board Computer (SBC).
- **SOTA** (2017): SOTA is modified bootloader for Atmel micro-controller to make their firmware distribution process secure. In this project, existing STK500v2 protocol was extended by adding new firmware distribution commands by utilizing asymmetric encryption algorithms.
- **Proviz** (2016). PROVIZ is an integrated visualization and programming framework with the following features:
 - a visualization tool that can visualize heterogeneous WSN traffic
 - a programming language based on various IoT devices sensor network platform that aims at reducing code size and improving programming efficacy
 - an over-the-air programming tool to securely program sensor nodes
 - a visual programming tool with basic sensor drag-and-drop modules for generating simple WSN programs
 - a visual network comparison tool that analyzes packet traces of two networks to generate a juxtaposed visual comparison of contrasting network characteristics

In this project, Apache Freemarker, JAVA, Swing Library, ANTLR V4 Bluetooth LE, 2.1+ and Wi-Fi protocol stacks were used. More details about project can be found at <https://www.proviz-project.net>.

- **CodeGen** (2016). project is automatic code generation platform that can be used by business analyst to create mobile application. Business analyst can create mobile application by using drag'n drop software development feature. Android, Cottle Template Framework, MSSQL.
- **VDPMAG** (2015). Valensas Digital Publishing (VDP) is a platform which allows you to easily create, customize and publish your content to the IOS and Android devices, fast! JAVA, Android SDK, Amazon Web Services
- **INGBank Paramara App** (2014). Map module of Paramara App was developed and it shows nearest ATM or branch location, generates route to them. Java. Android SDK, Google Cloud Services.
- **HealthierApp** (2015). HealthierApp is a daily healthy meal planner that prepares meal to user regarding user's daily nutrition requirements, minimizing cost of meals and selecting user's favorite foods. Java, Android SDK, Amazon Web Service, Spring Boot Framework, Jmetal
- **Token Machine (JetonMatik) Monitoring Software**(2013 – 2004). Income and troubleshooting monitoring software. Microsoft SQL, PHP, JavaScript, XML
- **Vindinium AI Project** (2015). Bot player for Vindinium AI contest and this was prepared in scope of Artificial Intelligence lecture at ITU. Java
- **ITU Ring** (2014). ITU Ring is android application that shows shuttle position at ITU main campus by using GPS technology. Java

Publications

- Cybergrenade: Automated Exploitation of LocalNetwork Machines via Single Board Computers, The Fourth National Workshop for REU Research in Networking and Systems, IEEE MASS 2017
- SOTA: Secure Over-the-Air Programming of IoTDevices (submitted)
- Proviz+ : A Simplified Secure Programming Platform for Internet of Things Devices (submitted)
- Classification of Android Malware Applications Based on Static Features (submitted)

ADDITIONAL EXPERIENCE AND AWARDS

- **Graduate Research Assistantship Scholarship** from FIU Electrical & Computer Engineering Department.
- Istanbul Technical University (Bachelor Degree): Rank: 3/104 Top %3; summa cum laude
- Top 0.3% percentile in university entrance exam.
- **Member of Seed for Future Program '15:** gained scholarship for China ICT technologies technical trip from Huawei Company.
- Chinese Language & Culture Study (July 2015 – Beijing/China)
- **Cybersecurity Summer School '14:** participated accelerated software and network security courses that were given by Tubitak Cybersecurity Institute.
- **Hackstory #3 Hackthon (Turkey):** Most potential use category winner.

Volunteer Activities

- Worked at SOBEWFF festival as front desk personnel and helped companies to refresh their product during festival.
- Provided basic information about Internet of Thing devices to high school students during high school university promotion fair at FIU
- Served as sponsor and public relation communication officer at ITU Solar Car Team.

Languages and Technologies

- C++; C; Java; Android; Python; Swift; Objective-C; SQL; JavaScript; Metasploit; OpenCv; ROS; Bluetooth LE, TCP/IP
- IntelliJ IDEA; Android Studio; MongoDB; XCode; Interface Builder; Sketch; Zeplin