# Mustafa AKGÜL

# Software Developer

Beylikdüzü / Istanbul

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# **Career Objective**

Software developer, trying to specialize in Python, Golang, and IoT.

# **Personal Information**

Birth of Date: 13.06.1993Military Status: DoneForeign Language: English

# Skills

#### **Programming/Scripting Languages**

Core: Python, Golang

Side/Old: C#, JavaScript, C-Embedded, Java

#### Frameworks/Systems

Core : Django, DRF, Gin Side : .NET Core, ASP.NET

#### Databases

PostgreSQL, MsSQL/T-SQL, Oracle/PL-SQL, MySQL, PI System Timeseries DB, InfluxDB, Cassandra

# IoT/Internet of Things

Custom IoT Platform for LoRa, OSIsoft IoT Platform, Thingsboard IoT Platform, ARM Pelion, Chirpstack LoRaWAN Network Server

#### **Electronics/Telecommunication**

LoRa/LoRaWAN, WiFi, Bluetooth/BLE, Stochastic Processes, Digital Signal Processing, Kalman Filtering, Hidden Markov Models, Localization, Circuit Design

# Work Experience

October 2020 - Now Atlas Software Istanbul, Turkey

# Software Developer

#### • Atlas Finans Zekası

Software solution for accounting and obtaining predicted values from its data.

**Techs**: Python, Django, Django Rest Framework, Docker, Jenkins, VueJS, Bootstrap

## • Electric Meter Project

Integration of prepaid system over GSM consuming Manas (Electric Meter Company) API and Bank of Georgia integration.

Techs: GoLang, Gin, Gorm, PostgreSql, Restful, Docker.

#### • Netbus Middleware Service App

Written many services for rapid performance between connecting Oracle DB and many other website like ticket website and mobiles.

Techs: GoLang, Gin, Gorm, PostgreSql

# • Application Server Microservices for LoRaWAN Network

Implementation IoT data to blockchain mining.

Techs: Python, Golang, Microservice, Solidity

#### • Smart Door Project

This system is working fully online over Zigbee tracking door and room status.

Techs: Orbita Door, Golang.

#### • Hotel System Project

This system is integrated hotel management system (PMS) and smart door project. Main goal is to use single card at smart doors and stores. Loading can be done on web, kiosk and reception.

Techs: C#, .NET Core, Golang, MsSql, Odbc, Mdb, Gorm, GRPC, Websocket, Win Form.

# AtlasPay

Building Payment system API for holding's companies to integration Finansbank and Vakıfbank.

Techs: Golang, PostgreSql.

# • Ülkem Bafra Bakliyat Production Project

Rice factory automation.

Techs: C#, .Net Core.

# • Maintenance Projects

- o Avtur: avtur.com.tr
- Ticket App: metrogeorgia.ge
- Metro Yatırım: metroyatirim.com.tr
- o Avter: avter.com.tr
- Rapor App: rapor.avter.com.tr
- Metro Portföy: metroportfoy.com.tr
- Holding: metroholding.com.tr
- Tofed: tofed.org.tr
- Mepet: mepet.com.tr
- Metro Port: metroport.atlasyazilim.com.tr
- Avtur: avtur.com.tr
- Atlas Portal: ms.atlasyazilim.com.tr
- Sign: imza.atlasyazilim.com.tr

# Work Experience

Sep.2020 - Oct.2020 Volsoft Tekirdağ, Turkey

# IoT Software Developer

- Thingsboard IoT Platform : JavaEE & AngularJs Development
- End Node Design for LoRaWAN Using Microchip LoRa RN2483, STM32L Low Power Series on Cube
- End Node Design for NB-IoT Using Quectel BG95

Aug.2019 - Sep.2020 Kontrolmatik Tech. Istanbul, Turkey

## IoT Software Developer

# • IGA Energy Tracking Project

Detection of broken lighting by connecting to the panels via Modbus.

Techs: Kontrolmatik IoT Platform

#### • Meter Tracking Project

Storing and billing of meters data connected by serial communication on the IoT platform.

**Techs**: Kontrolmatik IoT Platform, Chirpstack API, Thingsboard API, Cassandra.

#### • Kontrolmatik IoT Data Platform

Written many services for rapid performance between connecting Oracle and many other website like ticket website and mobiles.

**Techs**: Python, Django, Thingsboard IoT Platform, Tektelic LoRaWAN Gateway, Chirpstack LoRaWAN Network Server, Influx DB.

## • LoRa & LoRaWAN End Node Design

Creating IoT End-Node using Eagle.

Techs: Microchip LoRa RN2483, PIC18FXX, MplabX

#### • Arduino Based LoRaWAN System Design

Developed for testing purposes to understand LoRa infrastructures.

**Techs**: Arduino, The Things Industries Network Server, RAK811

#### Oyak Cement OsiSoft PI System IoT Data Platform

- Developed 11 Custom Tools Development Angular JS,Web Services
- o Pi System 2018
- Pi Interface for OPC DA
- o Pi Vision
- o Pi Datalink
- o Pi Builder
- o Pi Audit Viewer for Logging
- Manual Logger
- Notifications
- o PI to PI Interface
- o PI Interface for CITECT
- o PI Interface for ModbusE
- AF Structure
- o EPIAŞ API Development & Integration
- Manual Data Entry Using Javascript
- o Automatic Data Entry for Excel Using Visual Basic
- BackUp Infrastructure

# Work Experience

Apr.2019 - Aug.2019 Clonera Istanbul, Turkey

# Assistant System Engineer

- VMware & Vcenter Support
- Server & Storage Support
- Backup & Recovery Processes Using Veeam
- Active Directory Management
- System Monitoring
- Replication Support Using Zerto
- Infrastructure, IT Systems

Feb.2018 - Dec.2018

Sirius Electric Istanbul, Turkey

## Intern Engineer

- Electrical Projects
- AutoCAD
- Technical Electric
- PLC Programming

Oct.2017 - Nov.2017

Esi Electronics Istanbul, Turkey

# Intern Engineer

- Automation Engineering
- PLC Programming

Jun.2017 - Sep.2017

Sirius Electric Istanbul, Turkey

## Intern Engineer

- Electrical Projects
- AutoCAD
- Technical Electric
- PLC Programming

Oct.2017 - Nov.2017

Esi Electronics Istanbul, Turkey

#### Intern Engineer

- Automation Engineering
- PLC Programming

Jun.2016 - Sep.2016

Sunny Electronics Istanbul, Turkey

# Intern Engineer

· Manufacturing Engineering

Education

2013 - 2018 Sakarya University Bachelor of Faculty of Engineering

Electrical - Electronics Engineering Computer Engineering [Double Major, First 3 years were done] 3.27/4 GPA 3.16/4 GPA

# **Projects**

# Microservices App for Online Learning System , Oct 2021 - Dec 2021

Test App for Microservices Development includes 6 services.

Technologies: C#, .Net Core, RabbitMq, Docker.

# Real Time Face Recognition Project for Personal Identification , April 2020

Developed with Python and OpenCV for a School Company used for Personal Identification.

Technologies: OpenCV, Python, Deep Learning, QT for Desktop.

## Order Tracking System, Jan 2019 - Mar 2019

Developed with Spring Framework and Java for a Glass Company.

Technologies: Spring Boot, Bootstrap, Jpa-Hibernate, Maven, Java.

#### Publishing Platform, Jan 2019 - Mar 2019

Marketing & Seo tool for middle size companies. Developed with Spring Framework Boot and Java.

Technologies: Spring Boot, Bootstrap, Jpa-Hibernate, Maven, Java.

#### Blog App Spring Boot Project, December 2018

Projects and their descriptions for blog. Open source projects on Github to contribute in Turkish literature.

Technologies: Spring, Spring Boot, Oop, Aop, Spring Security, Spring Data, Spring Cloud, Maven, Jpa, Hibernate.

# Estimation Methodology on Kalman Filter and Hidden Markov Model for Timeseries Data , August 2018 - December 2018

Application for Master Thesis.

Technologies : Matlab, Python , Deep Learning, Kalman Filter.

# Error Parameters Modelling for IMU Sensor Using Matlab and Indoor Positioning System Using Mpu6050, Jan 2018 - Apr 2018

Processing data taken sensor in Arduino and sending Matlab to use Signal processing and probability libraries. Tried to obtain core data in two main parts of errors – stochastic and deterministic errors.

Technologies: Matlab, C, Arduino, Mpu6050 Imu Sensor, Stochastic Process.

# Pot Cover Bending Automation Using Gmt PLC, March 2018

Developed with Gmt Plc

Technologies: Gmt plc, Ladder Diagram, Industrial Automation.

## Robotic Positioning System Using Wi-Fi Triangulation, Dec 2017 - Jan 2018

Basic localization system using ESP8266

Technologies: C, Arduino, Stm32f4 MCU.

# Indoor Positioning Calculation Using a Android Mobile Phone and a IOT Circuit (RSSI) Nov 2017 - Dec 2017

Indoor Localization Algorithms and Kalman Filter to enchange getting data.

Technologies: Android Studio, Esp Modules, MCUs.

# **Projects**

Voice Encryption & Decryption in Discrete Cosinus Tranform Using Chaotic Signal - DSP Project Oct 2017 - Dec 2017

Voice processing using Digital Signal Processing.

Technologies: Matlab, Dsp Algorithms.

Data Communication Between 2 Computer Using Visible Light Communication, Circuit Design & Implementation - Engineering Thesis Feb 2016 - Jun 2017

Circuit Design & Implementation - Engineering Graduation Thesis, User Interface

Technologies: LiFi, C, Arduino, Pcb Design, Communication Protocols, UI with C#, Proteus.

5 Axis Robotic Arm Mechanical & Kinematic Design (SolidWorks, Matlab, C#-Visual Studio) Jul 2017 - Mar 2018

Mechanical Implementation, Basic Kinematics Design Using Matlab

Technologies: SolidWorks, Matlab, C# - Visual Studio.

Mini Humanoid Robot with 18 Servo Motor, Sep 2016 - Mar 2017

Mechanical Implementation, Basic Kinematics Design Using Matlab

Technologies: Matlab, Simulink, Arduino, C.

Basic Mini Robot Projects and Their Basic Applications,

Jun 2013 - Jun 2016

Line Follower, Light Follower, Balance Robots

Technologies: Arduino, C.

Unity Mobile Game Development,

Apr 2016 - Sep 2016

Several mini projects including 2D platform game. **Technologies : C#, Unity Game and Physics Engine.** 

Microprocessors & Embedded System Applications, Dozens of Projects Using Peripheral Devices, Jun 2012 - Sep 2016

Numerous mini projects using basic embedded devices and their peripheral devices.

Technologies : ARM-CodeComposer CCS, TI Stellaris, Pic MplabX, Arduino IDE, Numerous analog peripheral component.