

Emir Yegane

☎ +90 505 100 02 21 ✉ y.sahab.amir@gmail.com 📍 Ankara/Türkiye in emiryegane 🌐 emiryegane

Summary

With over 15 years of experience, 9 years in software development with focus on AI and Desktop application development (using Qt, PyQt, PySide, Tinkter and Kivy), I specialize in Artificial Intelligence, Computer Vision and Embedded Systems with a competitive track record in planning, development, UI/UX and Efficient Project Management roles. I excel in Agile environments and thrive in multidisciplinary teams, bringing a dedicated, innovative approach to every project.

Strong Suits

Dedicated Accomplisher, Critical Thinking, Time Management, Multi tasking, Efficient Problem Solving, Research and Development, Coupling Science and Engineering.

Core Skills

Python , Cython, C++, MATLAB, R
PyQt, Qt, ROS
Computer Vision, Photogrammetry, Remote Sensing, Geodesy, Earth Observation (EO) Data
Geospatial Data Processing (QGIS, GDAL, GeoPandas, ArcGIS), Raster/Vector Handling
Ubuntu, Bash, Git
Communication Protocols, Sensor Fusion
Micro-processors (Raspbian, RTOS, Jetson Platforms)
Micro-Controllers (STM32)
Artificial Intelligence, Deep Learning (U-Net, HRNet, DeepLab, YOLO, Mask R-CNN), CUDA
SQL, Elastic Search
Docker, Git, Jupyter, Agile Project Management
SolidWorks, Blender, Blender CAD-Sketcher
Dynamic and Kinematic Leo satellite Orbit determination
CRS Systems and Datums (WGS84, UTM etc.), Machine Learning
GNSS/Radio/Radar Signal Processing and Space Geodesy
Satellite Georeferencing (LIDAR)
Raster Space-born Data Georeferencing

Experience

Bemo Group, Senior R&D Python Developer (AI/Embedded Systems) - Team Lead

- Embedded Python on Jetson platforms and Raspberry Pi.
- Cuda programing on Nvidia GPUs, Artificial Intelligence using Tensorflow and Pytorch, ONNX and TensorRT, Machine Learning and Computer Vision.
- Optical design, Medical Image Processing.
- Qt/PyQt/PySide GUI design and implementation on Microprocessor/Microcontroller based embedded carrier boards.
- Human eye detection (ROIS and pupils), Single frame range estimation.
- Estimation of refractive errors from data obtained in 850nm wavelength.
- Animal Body parts detection from thermal images. design and assembly of the device on an embedded platform with a thermal camera and touch screen onboard.
- Falcon Haptic Device and Elite Robots Synchronization and precise positioning.
- **Keywords:** Optical Systems, Python, Cython, Embedded systems, TCP/UDP, SQL, PySpark, CV, ML, AI-DL frameworks (Tensorflow, Keras, Pytorch, PyCuda), AI Compilers (ONNX, TensorRT), CAPs, Bash, fine grained classifiers, Qt, Ophtalmology, ARM, Jira, Robotic Arms, ROS.

Ankara, Türkiye
Aug. 2017 to Dec. 2025
8 years 4 months

ShootID, 3D Computer Vision consultant (AI/Embedded Systems)

- Ball and player detection for soccer player training system.
- Epipolar Geometry - Goal area ball detection and 3d coordinate analysis.
- Shoot Kinematics and initial force estimation.
- Photogrammetry, 3D computer vision, Extrinsic and Intrinsic camera parameter calibration, Automatic colinearity processes
- Cuda programing, Artificial Intelligence using Pytorch, ONNX, Machine Learning and Computer Vision.
- Docker containers.
- ROS2
- **Keywords:** Optical Systems, Python, Cython, C++, SQL, CV, ML, AI Compilers (ONNX), Bash, ROS2.

Ankara, Türkiye
Apr. 2024 to Nov. 2024
7 months

Nefes IOT, AI and Geomatics Department Project Manager

- Forest Fire spread simulation and modeling using satellite imagery and geospatial data.
- Fuel index estimation using hyperspectral Landsat data; vector/raster analysis.
- Self-supervised AI architecture for fully automated land cover classification.
- Image segmentation with U-Net and DeepLab in geospatial pipelines.
- Spectral Unmixing, Semi-Automatic Classification with QGIS, GDAL, GeoPandas.
- GPU-accelerated training using CUDA and PyTorch on EO datasets.
- CRS alignment and preprocessing in WGS84.
- Embedded C++ and sensor fusion, LSTM on time series, 2D/3D/4D signal modeling.
- **Keywords:** EO Data, Deep Learning, TensorFlow, PyTorch, CUDA, GIS, WGS84, UTM, Google Earth Engine (Introductory), Rasterio, Docker, Distributed Learning

Ankara, Türkiye
Apr. 2022 to Apr. 2024
2 years 1 month

Middle East Technical University, Project Assistant

- LEO satellite Orbit determination modern architecture for GPU platforms.
- **Keywords:** Satellite Image Processing, Template matching, Georeferencing, image Geolocation and Satellite Orbit determination [Kinematic and Dynamic - Kalman Filters - Quaternions]

Ankara, Türkiye
Aug. 2012 to Aug. 2016
4 years 1 month

Asia Akam Industries, Bathymetric Data Scientist- Hydrography

- **Keywords:** MySQL, Databases, Radio modems, DGPS, Marine Gyrocompass, Side Scan Sonar, Magnetometers, Hydrographical Data acquisition, Hydrography and Geomatics Engineering.

Tehran-Iran & Dubai-UAE
Mar. 2009 to Nov. 2011
2 years 8 months

Education

MSc. Middle East Technical University, Space Geodesy (Geodetic and Geographic Information Technologies) Aug. 2012 to Aug. 2016

- GPA: 3.74/4.0
- Estimation of ionospheric threat model parameters for GBAS using GNSS data for Marmara Region

BSc. Iran Azad University, Geomatics

Jan. 2006 to Jan. 2009

- GPA: 3.47/4.0
- Geo-Spatial Data Engineering, Statistical Analysis and Photogrammetric Acquisitions

Publications

Est. of GBAS Iono. Threat Model Param. Using Continuous GNSS Obs. for Category I Operations Apr. 2017

Onur Karslioglu, Mahmut, Yeganehsahab, Amir [Yegane, Emir], Durmaz, Murat

Assessment of Ionospheric Threat Modeling Techniques Over Marmara Region Aug. 2016

Onur Karslioglu, Mahmut, Yeganehsahab, Amir [Yegane, Emir], Durmaz, Murat

Multi-GNSS Assessment of Iono. Threat Model Param. for Ground Based Aug Systems (GBAS) Aug. 2015

Onur Karslioglu, Mahmut, Durmaz, Murat, Yeganehsahab, Amir [Yegane, Emir]

Additional Experience And Awards

Language abilities: Turkish and Azerbaijani [Mother Tongue], English [Fluent], Persian [Second Language], Deutsch [beginner]

ClimateLaunchpad: ClimateLaunchpad 2023

YFYI METU: YFYI METU 2023

Certifications:

Docker: in Docker for Developers

NGINX: in Learning NGINX

Coding: in Software Code and Design Smells

Ubuntu: in Building an Ubuntu Server

Technologies

Cloud Platforms: AWS, Google Earth Engine (basic experience), Dockerized training environments

Operating Systems: Linux, Windows

Languages: Python, C++, MATLAB, R

libraries: OpenCV, scikit-image, Rasterio, Open3D, Imagio, Numpy, Pillow, Scikit, Pandas, PyQt, PySide, Kivy, Tkinter, TensorFlow, PyTorch, Keras

Programming methodologies: OOP, Pipe-lines, Threading, Mutex, Events, Parallel computing.

Software: Visual Studio, Microsoft SQL Server, Eclipse, QGIS, ArcGIS, SolidWorks, Autocad, Quinsy, STM32 Cube

Hardware: Jetson Nano, Tx2, Xavier, Orin, Raspberry Pi, Arduino.

Communication protocols: UART, RS-232, SPI, I2C, TCP/IP

Sensors: Lidar, Echosounder, Radar, DGPS, GPS/GNSS, IP and USB Cameras [Thermal, Infrared, RGB, Hyper-spectral]

Electronics: Micro-switches, Micro-processors, Micro-Controllers