

# TUGAY ARSLAN

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Antrim, UK

## SUMMARY

- +7 years of industrial experience solving variety of challenging problems, motivated and versatile, outside the box thinker.
- Dedicated to take ownership and improving processes/products, organized and analytical, detail- and goal-oriented professional.

## EXPERIENCE

### Senior Systems Design Engineer

#### Sensata Technologies

11/2020 - Ongoing Antrim, United Kingdom

- Leading system design for Sensata's next gen. TPMS products based on BLE.
- Leading analysis and initiation of RF and system level performance of BLE TPMS.
- Submitted various invention disclosures during POC phase of the project.
- Leading development of features for next gen. TPMS products (ETFA, OTA Updates).
- Developed various tools (Python / R) to analyze/simulate system behaviour.
- Agile Product Owner in cross-functional team, lead HW, embedded SW teams in various challenging customer projects (BMW, Ford, Renault).

### Systems Design Engineer

#### Sensata Technologies

03/2018 - 10/2020 Antrim, United Kingdom

- Led passenger car (Geely, Volvo) and HVOR (BFDA, DFCV) projects, from initial requirement discovery through customer negotiation to delivery of the product.
- Developed various configurations, simulation tools and test nodes on CANoe.
- Designed TPM sensor model in Python to simulate the sensor and analyze RF collision statistics and Matlab scripts and GUIs to analyze system solutions.
- Trained the less experienced teammates by leading requirements workshops and backlog refinements.
- Provided my full support to develop mature test environment for verification team and influenced SW team to write high-quality user stories.

### Team Leader of Electronics System Team

#### Mikrosens Electronics

12/2016 - 07/2018 Ankara, TURKEY

- Led the design, production and development of one of the world's smallest thermal camera core with an electromechanical shutter and fully digital core by integrating/developing Mikrosens's first ASIC.
- Led the design, production and development of USB thermal cameras, development kits, test systems, camera cores.
- Led development of the cross-platform C++ API and Desktop Software.
- Led technical contributions and responsible for HW/SW and System Design of Mikrosens LWIR Module (multi array 2-3 LWIR camera) in SEERS (EU's Horizon 2020 programme), working with 7 partners in Europe.
- Developed C++ API including image correction algorithms to enhance partner's capability to detect ships, boats on the water from the air on a drone.
- Managed a team of 2 Electronics System Engineer, 1 SW Engineer and 1 Optics Engineer while directly reporting to Engineering Director

### Electronics System Design Engineer

#### Mikrosens Electronics

12/2014 - 06/2016 Ankara, TURKEY

- Designed mixed-signal rigid-flex PCBs (ARM Cortex-M) for thermal cameras.
- Designed universal motherboard, sensor boards for each imager in an automated test setup and small form factor universal development kit for the customers.
- Responsible for firmware development for ARM based solutions in C.
- Developed CMS (Content Management System) using PHP, MYSQL, JS to manage inventory and to store/display die/wafer, PCB and camera level test results.
- Developed .NET desktop API to connect test and production systems to CMS and .NET C# applications for internal systems such as PCB Test SW, Die Level Test SW.

## SKILLS

C/C# Python R JS C++ git

Keras/TF PyTorch Laravel SQL

php Solidworks Agile Sys. Design

RF Data Analysis Altium Docker

Unreal Engine Product Design BLE

UML Linux ML CV Matlab

## EDUCATION

### MSc Data Analytics

#### Queen's University Belfast

01/2021 - Ongoing Belfast, United Kingdom

- Data Analytics Fundamentals
- Database & Programming Fundamentals
- Behaviour Analytics and Visualization
- Data Mining
- Machine Learning
- Analytics in Action

### BSc Electrical and Electronics Engineering

#### Hacettepe University

09/2009 - 06/2014 Ankara, TURKEY

## PASSIONS



### Data Science

Very keen to make more progress on ML and CV. Love following new developments!



### Simulation and Physics

Love working with game engines. Recently started contributing on Microsoft/AirSim and developing my own game in Unreal Engine.



### Robotics and UAVs

I love automating stuff. Making my DIY 3D Printer, DIY CNC Mill and drones.



### Web and I.T.

HTML, JS and PHP was one of the first programming languages I learned. I value I.T. and DevOps skills a lot!

## EXPERIENCE

### Other Industrial Experiences

- Developed REST-API with Laravel(PHP) for Kid's Smartwatch/Tracker, Ulepus (2015)
- Completed 1-month summer internship in Navigation Department, Aselsan (2013)
- Completed 2-month summer internship in Avionics Department, Baykar (2012)

## CERTIFICATION/COURSES

### Unreal Engine C++ Developer

Udemy / 2022

### Int. to Deep Learning in Python

Datacamp / 2022

### Linear Classifiers in Python

Datacamp / 2022

### Master C++ Programming

Udemy / 2021

### Supervised Learning in R

Regression - Datacamp / 2021

### Working with Data in Tidiverse

Datacamp / 2021

### Int. to Text Analysis in R

Datacamp / 2021

### Int. to Data Viz. with ggplot2

Datacamp / 2021

### Text Mining with B-of-W in R

Datacamp / 2021

### OOP in Python

Datacamp / 2021

### Intermediate Python

Datacamp / 2021

### Introduction to Data in R

Datacamp / 2021

### Intermediate R

Datacamp / 2021

### Exploratory Data Analysis in R

Datacamp / 2021

### ASPICE - Sys. Design & SW

Sensata / 2019-2020

### FMEA

Apis-IQ / 2018

### CMP717 Image Processing

Hacettepe Uni. CS Grad. / 2016-2017

### Solidworks Certification

TekYaz Solidworks-Turkey / 2015

### Int. to Deep Learning with Torch

Datacamp / 2022

### Machine Learning in Python

Datacamp / 2022

### Supervised Learning

scikit-learn - Datacamp / 2022

### Supervised Learning in R

Classification - Datacamp / 2021

### Unsupervised Learning in R

Datacamp / 2021

### Cleaning Data in Python

Datacamp / 2021

### Building Web Apps with Shiny

Datacamp / 2021

### Sentiment Analysis in R

Datacamp / 2021

### pandas Foundations

Datacamp / 2021

### Introduction to SQL

Datacamp / 2021

### Introduction to Python

Datacamp / 2021

### Introduction to the Tidiverse

Datacamp / 2021

### Introduction to R

Datacamp / 2021

### Machine Learning

Coursera (by Stanford Uni.) / 2020

### Enterprise Architect and UML

Hippo Software / 2019

### CMP684 Neural Networks

Hacettepe Uni. CS Grad. / 2017-2018

### EE586 Artificial Intelligence

METU EEE Graduate / 2015-2016

### RESTful API with Laravel 5

Udemy / 2015

## FIND ME ONLINE



LinkedIn

[www.linkedin.com/in/tugayarslan](http://www.linkedin.com/in/tugayarslan)



GitHub

[www.github.com/TugayArslan](http://www.github.com/TugayArslan)

## PUBLICATIONS

### SPIE / Proceedings

**An advanced presence detection system using the CMOS Infrared (CIR) technology**

📅 05/2017

## AWARDS



**Hacettepe University Faculty of Engineering's Competition 2014**

Senior Design Project - Mini UAV Project

[www.tugayarslan.com/TugayArslan-hun1.pdf](http://www.tugayarslan.com/TugayArslan-hun1.pdf)



**Hacettepe University Electrical and Electronics Eng. Competition 2014**

Senior Design Project - Mini UAV Project

[www.tugayarslan.com/TugayArslan-hun2.pdf](http://www.tugayarslan.com/TugayArslan-hun2.pdf)



**Middle East Technical University Robotics Days (UORG) 2014**

Innovative Category with Mini UAV Project

[www.tugayarslan.com/TugayArslan-uorg.pdf](http://www.tugayarslan.com/TugayArslan-uorg.pdf)



**Istanbul Technical University Robotic Olympics (ITURO) 2012**

Innovative Category with Mini UAV Project

[www.tugayarslan.com/TugayArslan-ituro.pdf](http://www.tugayarslan.com/TugayArslan-ituro.pdf)

## SHARING IS CARING

### Hydrogen and Electric Car Team

#### Hacettepe University

📅 09/2014 - 06/2015 📍 Ankara, TURKEY

- Developed electronics for fuel cell powered vehicle and battery powered electric vehicle and designed telemetry system and cruise control system.
- Participated in Shell Eco-marathon Europe 2014, Rotterdam, Netherlands and Tubitak Elektromobil Races 2014, Izmit, Turkey.

### Hacettepe Robotics Society

#### Hacettepe University EEE

📅 09/2009 - 06/2014 📍 Ankara, TURKEY

- 5 years in robotics society I actively participated in the club life and administration, coordinating impactful projects and sponsorships.
- As president, I governed more than 200 members and orchestrated the whole organization.
- Achieved significant results in competitions.
- Trained and motivated a team of engineering students - Delivered Electronics, Embedded Systems/C Courses.