

Javad Ibrahimli

ADAS RESEARCHER · ELECTRONICS AND COMMUNICATION ENGINEERING STUDENT

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Personal Profile

Highly motivated Electronics and Communication Engineering student at Istanbul Technical University, with a passion for autonomy, machine learning, and robotics. Skilled in developing innovative solutions for autonomous driving systems, leveraging expertise in machine learning, computer vision, and sensor technology. Experienced in configuring and calibrating sensors for accurate data acquisition. Adept at Python, Ubuntu, and ROS. Proven track record in academic excellence and competitions, complemented by strong communication skills and a commitment to continuous learning and personal development.

Education

Istanbul Technical University

Istanbul, Turkey

BSc in Electronics and Communication Engineering

Oct 2021 - Current

- Chose Elective Courses interested in Autonomy, Machine Learning, Robotics and Programming
- **Courses:** Data Structures and Algorithms, Artificial Neural Networks, Machine Learning for signal Processing, Signal Processing, Probability and Statistics, Electronic Circuits

High School named after Kamil Ayyubov

Baku, Azerbaijan

High School

Sep 2010 - June 2021

- Passed with Distinction
- Specialised in Physics, Chemistry, and Maths with Computer Science

Work Experience

ITU ZES Solar Car Team

Istanbul, Turkey

Autonomous Systems Engineer

Feb 2022 - Now

- Developed software modules for autonomous driving systems, focusing on perception, planning, and control for solar car.
- Leveraged my expertise in machine learning, computer vision, and sensor technology to develop innovative solutions for autonomous navigation, obstacle detection, and safety.
- Among the team that trained YOLO model which detects more than 30 road signs. Each sign has nearly 1000+ photos for training.
- Configured and calibrated sensors, such as LiDAR, cameras, and GPS, to ensure accurate data acquisition.
- Strong analytical and problem-solving skills, with the ability to develop innovative solutions for complex technical challenges.
- **Skills:** Python, C++, Ubuntu, ROS, Object Detection, Perception, OpenCv, SLAM, Localization, Kalman Filters

World Coffee Portal

Online

Price Analyst

Feb 2023 - Mar 2023

- Collecting and recording beverage prices of the most popular types (filter coffee, cappuccino, and latte) from branded coffee chains across Istanbul.
- Analyzing the data collected to determine the average beverage prices for each branded coffee chain across Istanbul.
- Ensuring that the data collected is accurate and up-to-date, and that all relevant details (e.g. location, chain name) are recorded
- Visualizing the data using Python libraries and using them in the final project report at the end of the project.

Istanbul Technical University

Istanbul, Turkey

Student Assistant

Dec 2022 - Mar 2023

- Adding coding assignments to in-class files and GitHub, providing students with the opportunity to practice and apply the concepts they were learning.
- Regulating technical tasks such as setting up equipment, troubleshooting technical issues and making sure that the course runs smoothly.
- Updating the course slides, ensuring that they were accurate and up-to-date with the latest information and industry developments.
- Strong analytical and problem-solving skills, able to address challenges in real-time and provide effective solutions to ensure the smooth running of courses.

Upwork

Online

Freelance Programmer

May 2022 - Nov 2022

- Completed the software tasks requested by the customers within the given time
- Automated and optimised the data handling process for traffic signs, working with Ubuntu 20.04 did shell scripting, and employed other Linux tools.
- Significantly boosted the model's accuracy by 30%, which was yielding an accuracy of 70-78% under Indian street light. The older models had an accuracy of 40-50%.

Projects and Certificates

Self-Driving Cars Specialization

Coursera

University of Toronto

Nov 2023 - Feb 2024

- Apply these methods to visual odometry, object detection and tracking
- Used realistic vehicle physics, complete sensor suite: camera, LIDAR, GPS/INS, wheel odometry, depth map, semantic segmentation, object bounding boxes
- Implemented a hierarchical motion planner to navigate through a sequence of scenarios in the CARLA simulator, including avoiding a vehicle parked in car lane, following a lead vehicle and safely navigating an intersection. (**FINAL PROJECT LINK**)
- **Technical Skills:** Python, Computer Vision, Perception, Localization

Machine Learning Models for Heart Attack Prediction

Figshare

ITU

Jan 2024

- A comprehensive analysis of machine learning models for heart attack prediction by employing various analytical techniques to gain insights into the structure and characteristics of the dataset.
- Cluster analysis is applied to identify underlying patterns or subgroups within the data, indicative of specific risk groups or heart disease profiles. (**FINAL PROJECT LINK**)
- **Technical Skills:** Machine Learning, LATEX, Python
- **Soft Skills:** Presentation skills, Googling

GitHub Projects

Istanbul, Turkey

Online

Dec 2019 - Now

- Udacity Self Driving Car Engineer Nanodegree - Ongoing
- Udacity Robotics Software Engineer Nanodegree - Ongoing
- **Technical Skills:** Python, C++, C, Matlab, R Markdown, Anaconda Notebook, HTML/CSS, Simulink

You can find detailed information on my Github page

Skills

Programming Python (Pandas, PyTorch, NumPy, matplotlib, OpenCv and etc.), C, C++, ROS, \LaTeX (Overleaf)

Tools and others Linux/Ubuntu, VSCode, Tableau, Microsoft Office, Git/Github, MATLAB, Lanelet2, Gazebo, LIDAR

Soft Skills Googling, Teamwork, Problem-solving, Documentation, Adaptation, Working Under Pressure.

Achievements

2023	Teknofest Robotaxi-Full Scale Autonomous Vehicle Competition Finalist , One of the 23 teams selected from 1500+ applications	<i>Teknofest</i>
2023	Chosen participant of Cyber Take Off 2023 , One of the 160 people selected from the applications	<i>Turkish Technology</i>
2022	The only vehicle that can complete the race by getting full points , Among the 33 cars in the 2022 Teknofest Robotaxi competition.	<i>Teknofest</i>
2021	1410/1600 , Scholastic Aptitude Test (SAT)	<i>Azerbaijan</i>
2021	C1 , Turkish Proficiency Exam	<i>Turkey</i>
2020	8.0/9.0 , International English Language Testing System (IELTS)	<i>Azerbaijan</i>
2019	Winner , Azerbaijan Student Informatics Olympics	<i>Azerbaijan</i>
2016	Participant , The final stage of the 1st Logic Olympiad named after Lotfi Zadeh	<i>Azerbaijan</i>

Interests

Googling	Being one of the most important features of daily played a great role in my development.
Technical Writing	Wrote descriptive blogs about technology. Some of them are on my GitHub and Medium.
Fitness	I do regular sports because it increases my work performance and endurance.
Music	Sometimes I listen to music because it relaxes and motivates me.
Online Learning	Coursera, EdX, Udacity.

Languages

English	Professional proficiency (IELTS Score(8.0))
Turkish	Native proficiency (Turkish Proficiency Exam Score - C1)
Azerbaijani	Native proficiency
Russian	Intermediate proficiency