

ABDALAZIZ RASHID

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EXPERIENCE

Founder of

SCTD Performance

📍 Baghdad, Iraq

- SCTD Performance is a company specialized in designing and manufacturing devices for high-performance cars that use internal combustion engines. some of the products that I developed (Water Methanol injection systems, Custom ECU's, Highly optimized air-intakes)

Machine Learning Engineer

ITcanFLY

📍 Moscow, Russia

- Applied transfer learning to achieve data efficiency while training on stereo video data. created a pipeline to collect and pre-process the data for the task. used augmentation to optimize training efficiency. implemented different architectures for solving the liveness problem using: Depth map generative models, optical flow generative models, texture analysis.
- Participated in the development of products as an Embedded System Engineer, designing and testing of PCB designs, low-level software development for ARM Processors, drivers development, device trees, kernel modifications, debugging hardware using Oscilloscopes, spectrum analyzers, function generator), implementing GNSS systems and communications using WiFi, 2G, 3G, 4G LTE.

Data Scientist

Wonderobe

📍 Moscow, Russia

- Responsible for the data science department of the company. Our main product is fashion compatibility and recommendation system.

SKILLS

Proficiency in GNU Linux, BSD, RTOS

Programming languages: Python, C++, Julia, Matlab

Frameworks: Pytorch, OpenCV, TensorFlow, Keras, scikit-learn

Electronics and engineering: Altium Designer, Mentor Graphics, Cadence Design Systems

Embedded Systems: Single board computers, Microcontrollers

EDUCATION

Ph.D. Computer Science

National Research University Higher School of Economics

📅 2020 - Current

Master Degree in Computer Science and Engineering

National University of Science and Technology "MISIS"

📅 2018 - 2020

Bachelor Degree in Petroleum Engineering

AL-Farabi University

📅 2013 - 2017

MY PROJECTS

Liveness estimator using Stereo Camera

- Transfer learning from optical flow task to implicitly estimate 3d structure for liveness detection. Building a pipeline starting from data collection to a demo application.
- Generating depth map using stereo cameras for liveness detection, fraud detection. Using Semi-Global Block Matching algorithm.

First security layer for ATM's

- Designed and Programmed a first security layer for ATM's.
- Used Flammable gas detectors, accelerometers, gyroscopes, GNSS, WiFi, 2G-3G communication with the base station.

Water Methanol Injection System

- Designed, programmed, and manufactured the hardware. It works by injecting water-methanol mixture into the combustion chamber of the engine to reduce temperatures, decrease detonations(knocking), and performance enhancement.
- It uses an empirical model to calculate the injection time and the volume of fluids that enter the engine with different operating conditions.

Signal analysis of Auger Electron Spectroscopy and X-ray Photoelectron spectroscopy

- Using differentiation, polynomial curve fitting, and background noise reduction to detect peaks and calculate their area under the curve for elements detection in a given sample and determine the elements concentrations.

Automobiles Engine Control Unit

- Designed and manufactured Custom Engine Control Unit (ECU) for different Engines.
- ECU tuning using algorithms (MAP, MAF) according to the applications.

Magnetron sputtering Device

- Designed sputtering system used to deposit a thin film of metals or ceramics on different targets.
- It uses an empirical model to determine the deposition rate and the thickness of the deposited material