Nikolay Lyan

linkedin.com/in/kolyalyan
uzay-muhendisi.com
nikolay@uzay-muhendisi.com
+905353844802

Summary

I am engaged in 3D design (CATIA, SolidWorks, Inventor, Fusion 360), engineering calculations (aerodynamics, thermodynamics, statics) in ANSYS, and mathematical modeling (MATLAB).
Experienced in developing image processing algorithms (identifying objects based on statistical analysis).
Coding in such program languages as C/C ++, Python, and PHP.

Experience

Freelancer

Upwork
2020 – now

Development of 3D models of varying complexity;

Conduction of various physical simulations – calculation of static, dynamic, shock, aerodynamic and thermodynamic loads;

Mathematical modeling;

Applied and web programming;

Analysis and automatic image processing software development.

Mechanical Engineer

İTÜ APİS ARGE TAKIMI
2019 – 2020 (2 years)

Development of 3D models of the UAV fuselage;
Aerodynamic analysis of the UAV models (using XFLR5 and ANSYS Fluent);
Development of a program for direct import of airfoils from the https://airfoiltools.com/ website into Autodesk Fusion 360.

Student Intern

AALR «Institute of Space Technique and Technology»
Aug 2019 – Sep 2019 (2 months)

Designing 3D models of coaxial filters at various frequencies;
Electromagnetic analysis of coaxial filters (using ANSYS Electromagnetics Suite).

Student Intern

JSC «JV «Baiterek»

Baikonur Cosmodrome

Jul 2019 – Aug 2019 (2 months)

Study of the functional systems of the operating Baikonur cosmodrome. In particular, practical work was carried out on maintenance in the temperature control system of a space rocket, and the work of the assembly and test building was studied.

The Soviet functional diagrams of the 17Г39 temperature control system were digitized.

Avionics Specialist

ITU Team HEDEF

2016 – 2018 (3 years)

UAV onboard computer setup;

Onboard software development:

- Image acquisition script (from an onboard camera);
- Command receiving and processing script (from UAV control station);
- Image analysis program - autonomous localization of ground targets and determination of their geolocation;

UAV control station software development:

- Interface for interactive flight plan setup (including payload drop points setup) for UAVs with real-time tracking function;
- Program for dynamic creation of comparative wing profiles;

The general design of the logic of inter-program interaction between the UAV and the ground control station;

Adjustment of the components of the communication system between the UAV and the ground control station;

Setting up a secure data transmission channel between the UAV and the ground control station.

Education

Istanbul Technical University

Bachelor's degree, Aeronautical and Astronautical Engineering

2016 – 2021

Nişantaşı Nuri Akın Anadolu Lisesi

Student, Science

2014 – 2016

Licenses & Certifications

STUDIO CAMBRIDGE CERTIFICATE - Studio Cambridge

Honors & Awards

Siber Yıldız – USOM

Feb 2019

2nd place in Siber Yıldız 2019 competition as a team «ISTeknik»

Overall grand champions – IMechE UAS Challenge

Jun 2018

1st place in UAS Challenge 2018 as ITU Team «HEDEF»

Foreign languages

Russian · English

Skills

DS CATIA · DS SOLIDWORKS · Autodesk Fusion 360 · Autodesk Inventor · Mechanics · Aerodynamics · Thermodynamics · ANSYS Fluent · MATLAB · Simulink · C/C++ · Python · PHP · Linux · Pentest · Arduino