VOLKAN AYDINGÜL

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EDUCATION

Koc University   September 2020 -
MSc. Computational Science and Engineering Department
Current CGPA: 3.88

Middle East Technical University   August 2015 - June 2020
BSc. Aerospace Engineering Department
CGPA: 3.21

RESEARCH EXPERIENCE

Autonomous Vision Group (AVG), Koc University *Istanbul*
June 2022 -
MSc Student

- Model-based policy learning for urban driving
  - Worked with CARLA simulator extensively
  - Design and implementation of various policy learning models for autonomous driving

Research Fields: E2E learning, autonomous driving, imitation learning

Robotics and Mechatronics Laboratory (RML), Koc University *Istanbul*
September 2020 - June 2022
MSc Student

- Learned texture generation based on the desired affective response of human
  - Worked on the design and implementation models that generate texture geometry
- Tactile perception of randomly rough surfaces
  - Band-limited mathematical modeling of texture randomness
  - Design and implementation of a human-participated experiment to test the effect of different parameters on tactile perception
  - Statistical analysis on experimental data

Research Fields: Surface haptics, texture generation and rendering, surface randomness

WORK EXPERIENCE

UNVEST R&D Center, Istanbul   September 2022 - Now
Research Engineer

· UNVEST is a wholly-owned subsidiary of Koc University (Istanbul, Turkey).

HAVELSAN Inc., Ankara   March 2020 - September 2020
Candidate Engineer   *Education and Simulation Technologies*

- Worked on the software development for aerial simulation systems

INTERNSHIPS

TUBITAK SAGE - Defense Industry Research and Development Institute *Ankara*
June 2019 - July 2019
Intern, Flight Mechanics

- Flight mechanics, navigation system, and gravitational model simulations

- Modeling of attitude determination of an aerial vehicle

- Motion planning

Research Fields: Simulations, flight mechanics, gravitational models, quaternions, attitude determination, navigation system, mathematical modeling.

TUBITAK UZAY - Space Technologies Research Institute *Ankara*
August 2019 - September 2019
Project Intern

- System design and analysis of a CubeSat satellite with SysML language

- Model-based systems engineering (MBSE) practices

Research Fields: Systems modeling and engineering, requirements analysis, spacecraft systems, space technologies.

TEACHING EXPERIENCE

Koc University *Istanbul*
June 2022 -
Graduate Teaching Assistant

- MECH 304 - Dynamical Modeling and Control

  - Weekly problem and practice sessions on various subjects; MATLAB sessions; homework and project grading; student relations

- MECH 544 - Robotics

  - Weekly practice sessions; hands-on tutorials on various subjects in robotics; homework and project grading; student relations

inekle.com Online Education Platform *Ankara*
February 2016 - January 2018
Teacher

- Taught science courses online to high school students

TECHNICAL SKILLS

Software Skills

Advanced: C/C++, Python, Fortran , MATLAB® and Simulink®, LaTeX

Intermediate: Java, C#, Julia, Unity, Systems Modeling Language (SysML)

Novice: Wolfram Mathematica, ANSYS, HTML - CSS - JavaScript - PHP

General Abilities: Implementation of machine learning and deep learning algorithms and models, Modeling and simulation, Numerical computation, Object-oriented programming, Robotics

Hardware Skills

Quick prototyping with Arduino

AWARDS AND SCHOLARSHIPS

Koc University Is Bank Artifical Intelligence Fellowship Award	*June 2021 -*
Koc University Full Tuition Fee Exemption Scholarship	*September 2020 -*

PUBLICATIONS

E. Canbulut, V. Aydıngül, and B. Yağlıoğlu. Application of model-based systems engineering with sysml in a small satellite project. 10. Ankara International Aerospace Conference, 2019

LANGUAGES

Turkish: Native
English: Advanced at writing, reading and listening; upper intermediate level at speaking.

HOBBIES AND INTERESTS

Sports: Running, swimming, weight-lifting, yoga, table tennis
Art: Literature(especially science-fiction and poetry), film, music, theatre
Technology: Electronics, IoT

REFERENCES

Melih Koçak
TUBITAK SAGE - Defense Industry
Research and Development Institute
Expert Researcher
Mail: melihkocak@gmail.com
Tel: 05537214056

Burak Yağlıoğlu
TUBITAK UZAY - Space Technologies
Research Institute
Project Manager of Turkish Lunar Mission
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