Deniz Erdogan

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Education

Technische Universität München — München, Germany
MSc. in Computational Science and Engineering — 2023 - 2025 *(expected)*

- Graduate student in the Computational Science and Engineering Master's Program with a focus on computational mechanics and machine learning applications.
- Research area: Computational Methods and Machine Learning

Koç University — Istanbul, Turkey
Bachelor's in Computer Science and Mechanical Engineering — 2018 - 2023

- 3.91/4.00 GPA. Highest ranking student in Mechanical Engineering. Graduate of Computer Science and Mechanical Engineering. High Honor Student with scholarship.
- **Mechanical Engineering Thesis:** Manufacturing and Design of a Fully Automated TRV Chair for BPP Vertigo Diagnosis and Treatment
- **Computer Engineering Thesis:** Human Computer Interaction: Application of a "Furhat" Social Robot to Moderate Multiplayer Games

Work Experience

Sono Motors — München, Germany
Simulation and Data Modeling Engineer. Working Student. — Feb 2024 - Present

- Lead the implementation a solar energy yield simulation suite from the ground up.
- Increased the efficiency of the simulation pipeline more than 10x.
- Designed and implemented an automated system health check framework for telematics data, decreasing average troubleshooting time by 90% and ensuring critical alerts are flagged for 100% of high-priority systems.

Ubicro Technology — Istanbul, Turkey
Part-Time Mechanical and Software Engineer — June 2022 - June 2023

- Lead the software design of an automated aeroponic agriculture system.
- Built the necessary hardware and software for pH and temperature control of the unit.
- Helped finalizing the mechanical design of the product and the manufacturing pipeline for plastic injection.

General Electric, Aviation — Istanbul, Turkey
Part-Time Software Engineer — Feb 2021 - Dec 2021

- Conducted an in-depth evaluation of several open-source Finite Element Analysis software, resulting in a recommendation that streamlined modeling processes and reduced simulation time by 50% for engineering teams.
- Implemented automated simulation and analysis pipelines.

Siemens — Istanbul, Turkey
Part-Time Software Engineer — July 2020 - Feb 2021

- Worked on the development of the Software Development Kit (AppSDK) for the SINUMERIK Edge Project.
- Helped create a Python API for the users and increased the efficiency of the deployment pipeline as well as testing the artifacts.

Publications

1. Omer Subasi, Atacan Oral, Shams Torabnia, **Deniz Erdogan**, Mustafa Bilge Erdogan, Ismail Lazoglu, **"In Silico Analysis of Elastomer-Coated Cerclage for Reducing Sternal Cut-Through in High-Risk Patients"**, Journal of Biomechanical Engineering. DOI: doi.org/10.1115/1.4050912

AWARDS

- Academic scholarship in Koc University
- Highest ranking student award in Mechanical Engineering.
- Dean's Academic Excellence Award (x5)
- Best Senior Design Project Award in Mechanical

SKILLS

- 1000+ hours of lab and research experience.
- English skills in C2 level (Have a TOEFL score of 112/120).
- Machine Learning, Deep Learning, Computer Vision and Medical Image Analysis.
- GRE Scores: Quantitative: 168/170, Verbal: 154/170.
- Python, C/C++, OpenMP, OpenMPI, MATLAB, Unix Kernel, Object-Oriented Programming, Docker, Latex, SQL, Siemens NX and Computer Aided Design, 3D Printing.

COMMUNITY SERVICES

- Worked at an orphanage as a full time volunteer for 8 weeks in Cairo, Egypt in summer of 2019. This was an AIESEC project mostly focusing on helping disabled people. We would teach the kids English and computer skills along with completing their daily exercises with them.