

DENİZ ERDOĞAN

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Numerical Simulation · Computational Science · Automation · Machine Learning · Data Analysis

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|-----------------|--|---------------------------------|
| EDUCATION | Technische Universität München | München, Germany |
| | <i>MSc. in Computational Science and Engineering</i> | 2023 - 2025 (<i>expected</i>) |
| | <ul style="list-style-type: none">• 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 |
| | <i>Bachelor's in Computer Science and Mechanical Engineering</i> | 2018 - 2023 |
| | <ul style="list-style-type: none">• 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 | B.B.W Automotive | München, Germany |
| | <i>Software Engineer. Working Student.</i> | Nov 2024 - Present |
| | <ul style="list-style-type: none">• Worked on developing novel quality inspection mechanisms in BMW plants in Bavaria.• Engineered automated discrepancy analysis algorithms that reduced inspection time per component while increasing robustness.• Designed an intuitive inspection UI displaying 3D deviation heatmaps and automated pass/fail thresholds, reducing technician training time. | |
| | Sono Motors | München, Germany |
| | <i>Simulation and Data Modeling Engineer. Working Student.</i> | Feb 2024 - Nov 2024 |
| | <ul style="list-style-type: none">• 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 |
| | <i>CTO</i> | June 2022 - June 2023 |
| | <ul style="list-style-type: none">• 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 |
| | <i>Part-Time Software Engineer</i> | Feb 2021 - Dec 2021 |
| | <ul style="list-style-type: none">• 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 |
| | <i>Part-Time Software Engineer</i> | July 2020 - Feb 2021 |
| | <ul style="list-style-type: none">• 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

- Best Thesis Award in Mechanical Engineering
- Academic scholarship in Koc University
- Highest ranking student award in Mechanical Engineering.
- Dean’s Academic Excellence Award (x5)

SKILLS

- High Performance Computing, Scientific Computing
- Numerical Modeling and Simulation
- Finite Element Analysis, Siemens NX and CAD, 3D Printing.
- English skills in C2 level (Have a TOEFL score of 112/120).
- A2 level German
- 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.

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.