KUTAY KURUOĞLU

Mechanical Engineering Student
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EDUCATION

Gebze Technical University (GTU) — B.Sc, Mechanical Engineering (100% English), Kocaeli, Turkey Jun 2022 – Jun 2027

Turkish Education Association (TED), High School, GPA 96.94, Samsun, Turkey Jun 2017 – Jun 2020

EXPERIENCE

Manufacturing & Design Intern, Parsan Machinery Parts Industries, Kocaeli, Turkey Jul 2026

- Mapped the full forging-to-machining production lifecycle by shadowing design, hot-forging, and final-machining stages, building a working view of end-to-end manufacturing flow used to inform die-design decisions.
- Designed forging dies and forged part geometries in Siemens NX and Fusion 360, translating part requirements into manufacturable die models.
- Consolidated AM 355 stainless steel property data into a centralized Excel reference through in-depth technical research, then presented findings to engineering teams to support material-selection decisions.

PROJECTS

Electric Bus Cooling System Auxiliary Heat Pump Weight Reduction Project 2025

- Actively supporting the research and development processes in the project, led by Assoc. Prof. Dr. Gamze Gediz Ilis.

Harmonic Reducer Design 2025

- Completed detailed design of wave generator, flex spline, and circular spline components in SolidWorks as part of a 7-person team, delivering a manufacturable reducer assembly.
- Verified structural performance through static and dynamic load analysis in Ansys, then finalized material selection, manufacturing method, and cost analysis for each component.
- Confirmed design integrity by hand-calculating safety factor, interference fit, and gear ratio against Ansys results, presenting the validated design in English at a university-wide conference.

Smart Watch Design — Thermal Regulation 2024

- Led a smart-watch concept project from concept to jury presentation, coordinating work packages and project schedules as project lead.
- Designed an efficient periodic-cooling mechanism for user comfort by researching micro-tube and fluid-dynamics behavior, then presented the validated concept to an academic jury.

Satellite Tracking System, C# 2024

- Built a real-time satellite tracking system in C# within a 3-person team, engineering an architecture that calculates live speed and position data from mathematical and physical models.
- Delivered position and velocity outputs to end users in document format, translating the system's computed trajectory data into a readable report.

Excavator Design 2023

- Produced technical drawings and assembly designs for critical mechanical components, including the final drive gear and track, in Fusion 360, meeting defined engineering requirements.

ACTIVITIES

e-Founder Summit, Boğaziçi University, Istanbul Nov 2023

- Gained direct exposure to the entrepreneurship ecosystem by attending seminars and workshops led by industry figures and securing one-on-one mentorship sessions.

SKILLS

- **CAD & CAE:** Siemens NX, SolidWorks, Fusion 360, Ansys (static & dynamic load analysis), technical drawing and assembly design
- **Programming & Languages:** Python, C#, Visual Basic, MS Excel | English (B2), Turkish (native)
- **Interests:** Motorsports (including sim racing), Cycling