

# UTKU KEREM SOLMAZ

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## EDUCATION

San Diego State University (*GPA: 3.55, Dean's List: Fall 2024*)

San Diego, CA

*Bachelor of Science in Mechanical Engineering*

*Expected Graduation Spring 2026*

*Mechanical and Thermal Systems: Vibration Analysis Lab*

## TECHNICAL SKILLS:

SolidWorks(Advanced), Matlab(Intermediate), ANSYS(Intermediate), Python(Basic), Excel(Intermediate), Word, PowerPoint, Computer Proficiency, GD&T

## MECHANICAL SKILLS:

Precision Measurement, Power Tool Operation, Assembly/Disassembly, Torque Procedures

Fluent in Turkish and English

## ENGINEERING EXPERIENCE

C-UAS Competition – Senior Design Capstone Project | Team Quetzal, SDSU | Team Lead

September 2025 – Present

- Managed the end-to-end testing life cycle for the first functional prototype, confirming design assumptions and ensuring the platform met mission-critical requirements.
- Collaborating with 5 ME, 4 AE and 5 ECE (14) teammates to seamlessly integrate mechanical systems with avionics and controls.
- Executed Computational Fluid Dynamics (CFD) simulations in Ansys Fluent to optimize the aerodynamic profile, resulting in a 10% reduction in drag and improved thermal management for onboard avionics.
- Optimized material selection and designed for additive manufacturing to achieve a balance of strength, weight, manufacturability and 20% reduction in part cost.
- Authored and presented design documentation and design reports to faculty advisors and sponsors.

BRDG Innovation Challenge | **Hardware Team Lead (1<sup>st</sup> Place Winner)**

June 2025 – October 2025

- Collaborated on a multi-disciplinary team to design and prototype an interactive smart recycling bin with the goal of educating the young people on sustainable waste management.
- Developed hardware and software integration using Raspberry pi, sensors and servos to make an automated lid control mechanism.
- Optimized Python code for reliable real-time detection and actuation, improving response speed and accuracy.
- Conducted mechanical and software testing to validate system reliability, ensuring consistent performance under repeated cycles.
- Result: Obtained a **\$3500** award to further improve the concept and create a market ready product.

Treobytes, SD

July 2024 – August 2024

*Treobytes Facilitator*

- Developed and led engaging STEM content for a summer camp for 15-30 middle school students including those with learning disabilities, fostering an engaging and educational environment that exposed them to STEM content.
- Fostered an inclusive learning environment, successfully engaging and teaching students with diverse learning disabilities by adapting instructional strategies and content delivery.
- Trained and collaborated with co-facilitators and operational staff, strengthening team coordination and improving communication for seamless camp execution.
- Result: Graduated students with new knowledge and excitement to pursue STEM in the future.

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## WORK EXPERIENCE

Cold Stone Creamery La Jolla

January 2018 – January 2026

### ***Manager(Promoted from Staff Member)***

- Supervised and trained 20 plus employees in customer service, cashier, and conflict resolution.
  - Directed daily operations to maintain high customer satisfaction and efficiency.
  - Facilitated technical conflict resolution during high-volume shifts to ensure a seamless and efficient customer experience.
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## CAMPUS INVOLVEMENT

San Diego State University nthTry Engineering Club | Co-founder/Treasurer

September 2024 – September 2025