

# UTKU KEREM SOLMAZ

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## EDUCATION

San Diego State University (*GPA: 3.6, Dean's List: Fall 2024, Spring 2025, Fall 2025*)

San Diego, CA

*Bachelor of Science in Mechanical Engineering*

*Expected Graduation May 2026*

## ENGINEERING EXPERIENCE

C-Unmanned Aerial Systems Competition – Senior Design Capstone Project | SDSU | Team Lead      *September 2025 – Present*

- Managed cradle to grave testing life cycle for the first functional prototype, wrote testing documentation, confirming design feasibility and resulting in the platform's capability to meet mission-critical requirements.
- Collaborated with 5 Mechanical Engineering, 4 Aerospace Engineering and 5 Electrical and Computer Engineering (14) teammates to seamlessly integrate mechanical systems with avionics and controls, resulting in an air worthy autonomous aerial system.
- Executed Computational Fluid Dynamics simulations in ANSYS Fluent to optimize the aerodynamic profile, resulting in an %8 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 resulting in a %17 reduction in part cost.
- Authored and presented design documentation 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 K-12 students on sustainable waste management.
- Developed hardware and software integration for Raspberry pi, sensors and servo actuators resulting in an automated trash bin lid control mechanism.
- Optimized Python code for reliable real-time detection and actuation, resulting in a %24 improvement of response and accuracy.
- Developed and executed comprehensive mechanical and software testing protocols to validate system reliability, resulting in %98 performance consistency during cyclic testing.
- Result: Awarded **\$3500** to further improve the concept and create a market ready product.

Treobytes, San Diego

*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: Cultivated a pipeline for future engineers by delivering accessible STEM curriculum, resulting in **%100** student completion and increased enthusiasm for technical fields.

## WORK EXPERIENCE

Cold Stone Creamery La Jolla

*January 2018 – January 2026*

*Manager*

- Supervised and trained 20 plus employees resulting in improved customer service, and conflict resolution.
- Directed daily operations and managed team members to maintain high customer satisfaction and efficiency.
- Facilitated technical conflict resolution during high-volume shifts to ensure a seamless and efficient customer experience.

## CAMPUS INVOLVEMENT

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

*September 2024 – September 2025*

ENGINEERING APPLICATION SKILLS: SolidWorks(Advanced), Matlab(Intermediate), ANSYS(Intermediate), Python(Intermediate), Excel(Intermediate), GD&T