

TAYLAN GÖKÇE

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About me

I am a full-scholarship Mechanical Engineering student at Cankaya University, having completed my undergraduate coursework in 3.5 years with a GPA of 3.48/4.00 and ranked 2nd among 105 students in my department. Upon completion of my ongoing mandatory internship, I will have fulfilled my undergraduate graduation requirements.

I have gained hands-on experience in production engineering, mechanical design, 3D printing, composite manufacturing, testing and validation, and robotic systems through internships at Turkish Aerospace / TUSAS and TurkTraktor, as well as academic engineering projects.

As part of our TUBITAK 2209-A funded graduation project, I contributed to the design and production of an AI-based smart robotic gripper involving mechanical design, prototyping, sensor integration, computer vision, and system validation. Our project was awarded second place at the 19th R&D Project Market.

I aim to pursue engineering roles in aerospace, defense, manufacturing, mechanical design, and robotic systems.

Education & Training

Bachelor's Degree in Mechanical Engineering | Çankaya University | 15/09/2022 - 20/07/2026 | Ankara, Türkiye

Final grade: GPA: 3.48/4.00 | Department Rank: 2nd out of 105 students | Level in EQF: 6 | Website: <https://www.cankaya.edu.tr/>

High School Diploma – Science Track | Özel Oya Akin Yıldızlar Science High School | Ankara, Türkiye

Final grade: GPA: 95.18/100 | Level in EQF: 4 | Website: <https://www.oyaakinyildiz.k12.tr/>

Work experience

Mechanical Engineering Intern – UAV Division | SKY Discover Program | Turkish Aerospace / TUSAS / TAI |

19/06/2026 - 17/07/2026 | Kazan, Ankara, Türkiye

Currently completing a mechanical engineering internship in the UAV Division as part of the Turkish Aerospace SKY Discover Summer Internship Program.

Observing UAV-related production, composite manufacturing, and production-oriented engineering workflows within the aerospace and defense industry.

Gaining practical insight into tooling applications for composite structures, tool design processes, and CAM simulations.

Observing composite part and wing/blade production steps, as well as the manufacturing processes of leading-edge components used in TKS-type fluid-based ice protection systems.

Developing professional awareness of quality-oriented manufacturing, engineering documentation, production planning, process traceability, and cross-functional coordination.

Production Engineering Intern – Engine Production Department | Test Drive Program | TurkTraktor | 19/01/2026

- 13/02/2026 | Ankara, Türkiye

Completed a production engineering internship in the Engine Production Department, gaining hands-on exposure to high-volume engine manufacturing operations.

Observed engine production line operations, station-based workflows, equipment usage, and key manufacturing steps on the shop floor.

Designed and produced a 3D-printed poka-yoke assembly fixture to support scrap reduction, operational efficiency, and occupational safety objectives.

Developed SLA 3D-printed sealing components for cylinder head leak test applications, contributing to cost-effective in-house production support.

Supported continuous improvement, 5S, standardization, and agile shop-floor problem-solving activities through daily coordination, rapid feedback, and documentation.

Analyzed production and quality-related data and prepared Excel-based tracking and reporting documents.

Contributed to project-based engineering activities for projects commissioned by ASELSAN.
Supported the design and production processes of mechanical parts according to technical requirements.
Worked on CATIA-based mechanical design and engineering drawing tasks.
Gained hands-on experience in manufacturing workflows, technical documentation, and project-based engineering processes.

Lifeguard | Work and Travel Program | American Pool | 15/06/2025 - 22/09/2025 | Annapolis , Maryland, United States

Worked in an international environment, developing professional communication, teamwork, and responsibility skills through daily English interaction.
Ensured pool safety by monitoring the area, applying safety procedures, and responding to incidents according to established protocols.
Gained experience in working under pressure, shift coordination, and quick decision-making in a safety-critical environment.

Projects

TUBITAK 2209-A Funded AI-Based Smart Robotic Gripper Design and Production - GRIP-IN | 15/06/2025 - 10/06/2026

Contributed to the design, production, and validation of an AI-based two-finger smart robotic gripper developed as a TUBITAK 2209-A funded graduation project.
Worked on parallel-jaw mechanism design, CAD modeling, FDM 3D-printed prototyping, sensor placement, electronic component integration, and system-level testing.
Integrated Raspberry Pi 5, AI Camera, ToF/LiDAR sensing, servo actuation, and YOLO-based object detection for object recognition, distance measurement, and adaptive gripper control.
Contributed to dataset preparation, image annotation, model training, real-time perception testing, mechanical validation, and overall perception-to-grasp system integration.

SLA 3D-Printed Sealing Components for Cylinder Head Leak Test Applications | 19/01/2026 - 13/02/2026

Designed and produced SLA 3D-printed sealing components for cylinder head leak test applications during my internship in the Engine Production Department at TurkTraktor.
Developed a cost-effective in-house production alternative for externally supplied sealing components by applying CAD-based design, rapid prototyping, and shop-floor problem-solving methods.
Gained practical experience in additive manufacturing, production support, leak test applications, cost-oriented engineering solutions, and manufacturing-focused design improvement.

Motor-Driven Torsion and Fatigue Test Machine Design and Development | 15/06/2025 - 10/01/2026

Contributed to the design, manufacturing, and integration of a motor-driven torsion and fatigue test machine for cylindrical PLA specimens.
Developed a low-cost experimental setup using aluminum profiles, 3D-printed bearing housings, mechanical connectors, an Arduino-based control structure, and a geared DC motor.
Worked on assembly validation, cyclic torsional loading tests, hysteresis behavior observation, repeatability evaluation, and technical documentation.

Digital Tool Tracking System for Production Loss Reduction | 19/06/2026 - 03/07/2026

Developed a user-based digital tool tracking system during my internship at Turkish Aerospace / TUSAS to address tool searching and tracking losses observed in the production environment.
The system was designed to improve tool traceability through tool search, shelf/section viewing, check-out/return tracking, lost/damaged tool reporting, movement history, dashboards, and Excel-based reporting.
Gained practical experience in shop-floor problem analysis, lean digitalization, process traceability, and user-oriented application development

Experimental Heat Transfer Performance and Fin Efficiency Analysis of Extended Surfaces

Conducted an experimental heat transfer study on rectangular aluminum fins under forced convection using a compact wind tunnel setup.

Compared long and shortened fin configurations at different airflow velocities and evaluated their effects on temperature distribution, convection coefficient, Nusselt number, fin efficiency, effectiveness, and cooling performance.

Contributed to material supply and logistics, experimental setup preparation, calculation and data processing, and comparison of experimental results with CFD-based thermal and flow analyses.

Language Skills

Mother tongue(s): **Turkish**

	Understanding		Speaking		Writing
	Listening	Reading	Spoken production	Spoken interaction	
English	C1	C1	C1	C1	C1
German	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

Certifications

Siemens NX Unigraphics (UG) Fundamental 3D Modelling Course | Udemy

AutoCAD Certificate | Ankara Teknik Bilisim

Coding, 3D Printing and Robotics Workshop – Arduino-Based | MESS Education Foundation

ChatGPT Image Generation Master Course: GPT-4o, Sora & Canva | Udemy

Honours and Awards

Second Place Award – 19th R&D Project Market | Çankaya University Mechanical Engineering Department

TUBITAK 2209-A Undergraduate Research Project Support | TUBITAK

Academic Honour Recognition | Çankaya University

Recognized as a High Honour Student in four semesters and as an Honour Student in two semesters during undergraduate studies.

Skills

CATIA | Siemens NX | SolidWorks | Autodesk Inventor | Fusion 360 | AutoCAD | CAD software | Engineering Drawings | read engineering drawings | GD&T | ANSYS | CAM Simulation | Tooling | FDM 3D Printing | SLA 3D Printing | Microsoft Excel | Microsoft Powerpoint | Microsoft Word | MATLAB | Arduino | Raspberry Pi | Sensor Integration | YOLO-Based Object Detection | manufacturing processes | Continuous Improvement | Composite Manufacturing | Lean Manufacturing | 5S

References

References available upon request from TurkTraktor and ASELSAN.