



Talha Karasu

Embedded Systems Engineer (B.Sc. Candidate)

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Summary	Final-year Computer Engineering student with practical experience in embedded systems, PCB design, and C/C++ firmware development. Skilled in STM32 microcontrollers, motor control, and telemetry design. Proven leadership in electric and hydrogen-powered vehicle R&D projects. Passionate about building local, efficient, and scalable hardware-software integrated systems.			
Skills	C ● ● ○ ○ ○	C++ ● ● ○ ○ ○	Schematic Design ● ● ○ ○ ○	
	C# ● ● ○ ○ ○	ARM ● ● ○ ○ ○	PCB Layout ● ● ○ ○ ○	
Experience	Gökay Bilişim Hardware Design Engineer 🔗 https://gokaynet.com/	I actively took part in the design of IoT products and designed Wi-Fi controlled AC input switch boards.	September 2025 - November 2025	
	Göktim Akademi Embedded Instructor / Mentor	Provided mentorship and training to high school students in microcontroller projects, embedded systems, and project management under a regional government initiative.	2024-2025	
	VoltaFCEV Team Captain 🔗 https://www.instagram.com/voltacar/	Leading a hydrogen fuel cell electric vehicle project for Teknofest Efficiency Challenge. Coordinating software, hardware, and mechanical subsystems; supervising motor controller and battery management development.	2024-2025	
	VoltaCAR Motor Driver Unit Leader	Designed a 6-layer BLDC motor driver using STM32G431 with PID control and sensor feedback. Focused on analog filtering, driver ICs, and gate signal optimization.	2023-2024	
	VoltaCAR Telemetry Systems Developer	Designed UART-TTL based telemetry system communicating between vehicle controller and ground station. Used LoRa for long-distance transmission (~1.5 km).	2022-2023	
Education	Erciyes University Computer Engineering	2020-2025 Bachelor of Science	Anadolu University Web Design and Coding	2023-2025 Associate Degree
Projects	Teknofest Efficiency Challenge Participant	2022-2025	Scientific Research Project (BAP) Hydrogen Fuel Cell Vehicle	2025-Present
	Mini Ornithopter Design TUSAŞ Lift-Up & TÜBİTAK 2209-B Project	March 2025 - June 2025	TÜBİTAK 2209-A BLDC Driver Design FOC-Based 6 layer PID Controller for Electric Vehicles	2024-2025
Certifications	Teknofest Efficiency Challenge - Hydromobile 🔗 https://drdogrulama.sanayi.gov.tr/tr/verify/75205789128884 Finalist			2024
	Teknofest Efficiency Challenge - Hydromobile Finalist			2025
Languages	Turkish Native ● ● ● ● ●	English Intermediate ● ● ○ ○ ○		