



## 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++		
	C#	Schematic Design		
	PCB Layout	ARM		
Experience	VoltaFCEV	2024-2025		
	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.			
Experience	VoltaCAR	2023-2024		
	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.			
	VoltaCAR	2022-2023		
Experience	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).			
	Göktim Akademi	2024-2025		
	Embedded Instructor / Mentor			
Experience	Provided mentorship and training to high school students in microcontroller projects, embedded systems, and project management under a regional government initiative.			
Education	Erciyes University	2020-2025	Anadolu University	2023-2025
	Computer Engineering	Bachelor of Science	Web Design and Coding	Associate Degree
Projects	Teknofest Efficiency Challenge	2022-2025	Scientific Research Project (BAP)	2025-Present
	Participant		Hydrogen Fuel Cell Vehicle	
	Mini Ornithopter Design	March 2025 - June 2025	TÜBİTAK 2209-A BLDC Driver Design	2024-2025
	TUSAŞ Lift-Up & TÜBİTAK 2209-B Project		FOC-Based 6 layer PID Controller for Electric Vehicles	
Certifications	Teknofest Efficiency Challenge - Hydromobile	2024		
	https://drdogrulama.sanayi.gov.tr/tr/verify/75205789128884			
	Finalist			
	Teknofest Efficiency Challenge - Hydromobile	2025		
Languages	Turkish			
	Native			
	English			
	Intermediate			