



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++
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	C#	Schematic Design
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	PCB Layout	ARM
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Experience	Gökay Bilişim	September 2025 - November 2025
	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.	
	Göktim Akademi	2024-2025
	Embedded Instructor / Mentor	
	Provided mentorship and training to high school students in microcontroller projects, embedded systems, and project management under a regional government initiative.	
	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.	
	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
	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).	

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
	Finalist	

Languages	Turkish	English
	Native	Intermediate
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