

EKREM TURAN FIRAT

Power Electronics Design Engineer Candidate

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Education

Bachelor's Degree in Electrical and Electronics Engineering | Sivas Cumhuriyet Üniversitesi

2024 – Ongoing

- Entered the university as the top student in the department based on points, Grade point average: 3.27
- IEEE Student Branch PELS/PES Committee Chairman

Electrical-Electronics Technology Technical Degree | Cezeri Green Technology Vocational and Technical High School

2020 – 2024

- Grade point average: 87/100
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Experience

Undergraduate Researcher | METU Power Lab | Ankara/Sivas(Hybrid)

February 2025 – Ongoing

- I am involved in academic and commercial product studies within the laboratory on the design of TI C2000 based low phase induction motor drivers, design and driving of PCB motors and cyloid motors with Assoc. Prof. Dr. Ozan Keysan and his team.

Avionic Design Team Lead | Alpina Roket | Sivas

October 2024 – Ongoing

- Flight Control Computer and Payload Control Computer designs were made.

Committee Chairman | IEEE SCÜ Student Branch | Sivas

November 2024 – Ongoing

- I served as the chairman of the PES (Power and Energy Society) & PELS (Power Electronic Society) Committee.
- Participated in international symposiums.

Electronic Design Intern | Robolink Teknoloji | Yenimahalle, Ankara

March 2022 – August 2022 | June 2023 – August 2023

- PCB designs for sale on topics such as Laser CNC controllers, Stepper Motor Drivers, Pulse Generators, ESP32 were made.
- Competencies such as SMD Soldering, Oscilloscope Usage, PCB Testing stages were acquired.

Founder | Mergen Elektronik | Etimesgut, Ankara

June 2021 – Ongoing

- Personal project sharing platform | mergenelk.com
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Projects

Rocket Flight Control Computer | Alpina Roket

December 2024 – February 2025

- The flight control computer based on the STM32F411CEU6 microcontroller on the 6-layer PCB has been designed to manage operations such as transmission and recording of data during the flight of a rocket, as well as recovery operations of the rocket.
- [Project Documents](#)

Switched Power Supply Design (SMPS) | Mergen Elektronik

June 2024 – October 2024

- A power supply design with a 150Watt AC-DC 0-30V output range was made on a 4-layer PCB.
- [Project Documents](#)

ESP32 Based Laser CNC Motherboard | Robolink Teknoloji

June 2023 – August 2023

- PCB design for ESP32 based Laser CNCs compatible with GRBL software was made on a 4-layer PCB.

Stepper Motor Driver | Robolink Teknoloji

March 2022 – July 2022

- A PCB design was made for stepper motor control and testing on a 2-Layer PCB without requiring software or an external controller.
- [Project Documents](#)

ESP32 Developing Board | Robolink Teknoloji

Ağustos 2022

- 2 An ESP32 development board has been designed for testing ESP32 based applications within the company on a 2-Layer PCB.
 - [Project Documents](#)
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Organizations

3. Uluslararası Enerji Günleri | Emerjide Yapay Zeka Sempozyumu | SCÜ 100. Yıl Kültür Merkezi

December 2024

- I worked as a technical team member and stand attendant in the organization.
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Memberships

Institute of Electrical and Electronics Engineers(IEEE)

- Student Member
 - Power Electronic Society(PELS) Student Member
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Language Skills

English

- Listening: B1 | Reading: B2 | Speaking: B1 | Writing: B2
 - Sivas Cumhuriyet University Erasmus Language Exam:
 - Written Exam: 86/100
 - Oral Exam: 70/100
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Digital Skills

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| • Altium | • Fusion360 |
| • Autodesk EAGLE | • Proteus |
| • AutoCAD | • LTspice |