

# 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

- I was accepted to the university as the top student of my department, Grade Point: 3.27
- IEEE Student Branch PELS 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 work in the team led by Assoc. Prof. Dr. Ozan Keysan to design power electronics (motor drivers, PCB motors) circuits for academic and commercial use.

**Avionic Design Team Lead | Alpina Roket | Sivas**  
October 2024 – Ongoing

- I am involved in the design of the Flight Control Computer and Payload Control Computer.

**Committee Chairman | IEEE SCÜ Student Branch | Sivas**  
November 2024 – Ongoing

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

**Electronic Design Intern | Robolink Teknoloji | Yenimahalle, Ankara**  
March 2022 – August 2022 | June 2023 – August 2023

- I took part in PCB designs for sale on topics such as Laser CNC controllers, Stepper Motor Drivers, Pulse Generators, ESP32.
- 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](http://mergenelk.com)
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## Projects

### **Rocket Flight Control Computer| Alpina Roket**

December 2024 – February 2025

- I designed a flight control computer based on STM32F411CEU6 microcontroller on a 6-layer PCB to be used for the operational needs of a rocket.
- [Project Documents](#)

### **Switched Power Supply Design (SMPS) | Mergen Elektronik**

June 2024 – October 2024

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

### **ESP32 Based Laser CNC Motherboard | Robolink Teknoloji**

June 2023 – August 2023

- I designed PCBs for ESP32 based Laser CNCs compatible with GRBL software on 4 layer PCBs.

### **Stepper Motor Driver | Robolink Teknoloji**

March 2022 – July 2022

- I designed a PCB 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

- I was involved in the design of the ESP32 development board designed for testing ESP32 based applications on a 2 Layer PCB within the company.
- [Project Documents](#)

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## Memberships & Organizations

### **Institute of Electrical and Electronics Engineers(IEEE)**

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

### **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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# 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   |