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# Rishikesh Chapekar

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## Objective

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Final-year engineering student seeking an internship in an industry working on the design and development of electronic devices for applications in wireless communications, as well as analog communication between devices.

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## Experience

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### Self Employed / Freelancer

January 2021 - Present

I freelance as an electronics product developer and work mainly with overseas clients. My projects usually involve additional technologies like AI/ML, IoT and more. Over the last year, I have worked on 20+ projects and it has given me great insights into the practical applications of these technologies.

### TweetMakers / Co-Creator

April 2020 - Present

TweetMakers is an experimental site that uses generative text ML to create content in various text domains such as poetry, quotes and philosophy. I developed the ML algorithms for generating the text using different techniques such as Markov chains and recurrent neural networks (linked [here](#)).

### Amberoon Inc. / Data Analytics Intern

June 2022 - August 2022, California, USA

Data analytics intern at Amberoon assigned to graph database management with applications in financial technologies

### Krishigati Pvt. Ltd. / Backend Web Development Intern

June 2021 - August 2021, Pune

Interned at Krishigati as the backend developer for the company website. I was responsible for coding the backend in NodeJS and integrating a payment gateway for the products sold on the website.

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## Projects

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### Automated Dish Positioning System

Ongoing

Developing a positioning system that automatically aligns a directional receiving antenna with respect to its corresponding transmitter by measuring the amount of power received at different orientations and determining the alignment in which the maximum power is received. View more information [here](#).

### High Volume Light Weight DC Power Source

Ongoing

Developing a portable DC power source that is lighter than traditional power banks and has a much higher power capacity. It is being developed with the use of supercapacitors which provide a high capacitance thus allowing a higher discharge time. The challenge in this project is to design the circuits in a way that the charging time for the supercapacitor is low and the discharging time is much higher. View more information [here](#).

### LED VU Meter Using Filters

Completed

This project involved the design of filter circuits connected to an array of LEDs to control which ones light up based on the intensity of sound received by a microphone module.

View more information [here](#)

### Dual Band Microstrip Antenna Design For ISM Applications

Completed

Designed and simulated a microstrip patch that can be used for dual-band applications in the ISM band. This antenna was designed and simulated in Ansys HFSS. View more information [here](#)

### Antenna Design For UWB Applications

Completed

Designed and simulated a microstrip patch that can be used for ultra-wideband applications. This antenna was designed and simulated in Ansys HFSS. View more information [here](#)

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## College Activities

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### RedX Club / Student Lead

August 2021 -Present, MIT Academy of Engineering

Student lead of the RedX Club(an AI/ML club created by Dr Ramesh Raskar of MIT Media Labs, Massachusetts, USA), responsible for organising technical events related to machine learning and data science, and working on various real-life problem statements

### **HitchHackers Club / Co-Founder and Co-leader**

January 2021 - Present, MIT Academy Of Engineering

HitchHackers is a cyber security club that aims to promote awareness about online security as well as help students develop a base in cyber security to open career opportunities in this field

### **E-Cell Club / Core Member**

November 2020 -Present, MIT Academy of Engineering

E-Cell is the entrepreneurship club of MIT-AOE

I was responsible for organising various events to promote entrepreneurship among students. Other roles include being in charge of the team that develops and maintains event websites.

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## **Education**

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### **MIT Academy Of Engineering / Bachelor Of Technology**

August 2019 - May 2023 (expected), Pune

Bachelor of Technology in Electronics and Telecommunications Engineering

### **DAV Public School / Certificate of Higher Education**

2019, Pune

12th Std graduation under the Central Board Of Secondary Education (CBSE), India. Post-secondary education or the equivalent of Junior College

### **DAV Public School / Certificate of Higher Education**

2017, Pune

10th Std graduation under the Central Board Of Secondary Education (CBSE), India. Secondary Education or High School equivalent

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## **Skills**

- Electronics
- Power Electronics
- Telecommunications
- Signal Processing
- Antenna Engineering
- Ansys HFSS
- Python Programming
- Go Programming
- NodeJS (Backend Development)
- Backend Web Development
- Machine Learning