

# AYUSH KUMAR DASH

Electrical and Computer Engineer

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## PROFESSIONAL SUMMARY

I'm an Electrical and Computer Engineer, with an avid interest in Electric Vehicles and Formula 1 Racing Engineering Dynamics. This also includes embedded systems, where I have worked on key embedded systems hardware and software. I also have an avid interest in geopolitics, especially of the Cold War. As an Electrical Engineer, I work on Power systems and Powertrain domain related to the automotive or automobile part.

## EDUCATIONS

<b>Dr. Vishwanath Karad MIT World Peace University</b> <i>Bachelor of Technology</i>	Aug 2023 - Present CGPA : 7.89
Relevant Coursework: Electrical Machines, Power Systems and Protection, Microcontroller & Applications, Data Structures and Algorithms, Electric Vehicles	

## WORK EXPERIENCES

<b>Powertrain Engineer</b>   Part-time <i>Team Vegapod Hyperloop</i>	Aug 2024 - Jan 2026 Pune, Maharashtra, India
Collaborated with an electrical and electronics team on power systems, power electronics, and the working of VCUs (Vehicle Control Units). Worked on key aspects of the electrical subsystem, BMS, Motor Drives using SIMULINK, KiCAD, and LTSpice. Made PCB (Printed Circuit Board) design of Levitation Current Controller, Power Distribution Board for the hyperloop pod.	
<b>Technologies / Skills Used :</b> SIMULINK, KiCAD, LTSpice, Power Electronics	
<b>Research Analyst</b>   Part-time <i>Geostrata</i>	Aug 2024 - Sep 2024 New Delhi
Created content and researched on the geopolitical situations around the world, in which I had to regularly understand each and every aspect of what exactly happened around the world. Created short content about South America and Middle East.	
<b>Technologies / Skills Used :</b> MSOffice, GoogleDocs	

## PROJECTS

<b>Implementation and Working of BLDC Motor Driver</b> <i>Lead Electrical Engineer</i>	Jul 2025 - Nov 2025
Designed and researched various control techniques like 6-step commutation, FOC (Field Oriented Control), and ATS (AI Based) Control Algorithm technique. Worked on various SIMULINK Models and Simulation to understand different control techniques and parameters of a BLDC Motor, including Stator Voltage, Electromagnetic Torque, Speed, and Back emf. Also worked and experimented on a DSP or Microcontroller based on TI C2000 model, to provide gate signals to the power electronics devices.	
<b>Technologies / Tools Used :</b> Embedded Systems, SIMULINK/MATLAB, Code Composer Studio, STM32CubeIDE	
<b>F1 (Formula 1) Race Dashboard</b> <i>Self Developer</i>	Nov 2025 - Nov 2025
Designed and made an F1 dashboard , that consisted data of various Formula 1 drivers and their performance telemetry. It was fabricated with the help certain Python libraries , such as Pandas, Matplotlib, Scikit & Plotly. This dashboard showed race data, based on the various locations and the following 3 years, that is from 2021, 2022 & 2023 data.	
<b>Technologies / Tools Used :</b> Python, Scikit Library, Plotly	

## PROJECTS

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### LIM (Linear Induction Motor) Test Bench Design

Feb 2025 - Apr 2025

#### Junior Powertrain Engineer

Used Tinker CAD software to design the test setup of the Linear Induction Motor. Worked and tested on various types of sensors like Inductive Proximity Distance sensor and Hall effect sensor.

**Technologies / Tools Used :** Tinker CAD

## SKILLS

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**Programming Languages :** C, Python, C++

**Tools & Platforms :** MATLAB/SIMULINK, KiCAD (ECAD) PCB Design, LTSpice, Altair Flux, VSCode, STM32CubeIDE

**Databases :** MySQL

**Soft Skills :** Teamwork, Critical Thinking, Communication, Conflict Management, Analytical Thinking, Problem Solving, Public Speaking, MS Office, PowerPoint, Excel

**Languages :** English, German