



Tel: +91-124-4084599

URL:- [www.chakr.in](http://www.chakr.in)

Email:- [info@chakr.in](mailto:info@chakr.in)

## Job Description

### Company Introduction:

Chakr Innovation is a Series-B funded cleantech start-up founded by graduates from IIT Delhi. We aspire to be the most innovative and successful clean-tech company in the world and are working on multiple technologies to improve air quality and reduce carbon emissions from various sources. One patented technology, that we have already commercialized, reduces particulate matter emissions from diesel engines. Chakr Innovation is the first and only brand in the country to have the type-approved Retrofit Devices for Diesel Generators.

The technology is being used by 70 plus corporations across India including Coca-Cola, Toshiba, Kellogg's, Reliance Industries, Reckitt Benckiser, Asian Paints, Tata Group, Mahindra Group, Indian Army, and many more. We are in the process of developing multiple other technologies in the cleantech sector and want to accelerate the world's transition to clean and carbon-neutral technologies. We have grown from 2 founders to a team of over 125 full-time employees and have set up our manufacturing and R&D unit in Pune. We currently have offices in Gurgaon and Chennai and are aggressively expanding to other geographies. We have also been recognized and awarded by multiple national and international institutions including Forbes 30 Under 30, United Nations, the University of Chicago, the American Society of Mechanical Engineers, General Atlantic, Niti Aayog, and many more.

You can learn more about our work here: <https://www.youtube.com/watch?v=5-Xyc3kQa14>

### Job title :-

Battery Engineer - Modelling

### Location:

Gurgaon

### Roles & Responsibilities:

- Model-based design and development of metal-air battery system and chemistry using MATLAB/Simulink and scripting using MATLAB.
- Requirements analysis & developing 1-D physical models based on system and component levels.
- Support the development of systems/component design of the battery and its chemistry.
- Battery capacity requirement calculation based on the load requirement and backup requirements.
- Owns testing and qualification of metal-air battery packages for commercial vehicles.
- Model validation with test data, identify gaps and bridge them by refining simulation methods.
- Active contribution to Innovation: Product/Process/Business/Paper/Publication.
- Improving Power density, Energy density and other performance parameters of the metal air batteries.



**Chakr Innovation**

Tel: +91-124-4084599

URL:- [www.chakr.in](http://www.chakr.in)

Email:- [info@chakr.in](mailto:info@chakr.in)

- Planning and performing battery/cell characterization tests: energy, power, etc.
- Developing tests for battery performance, reliability, and safety.
- Researching and experimenting on materials, processes etc. which can improve battery performance, reliability, and safety.
- Creating and maintaining technical documentation.
- Filing patents on the developed novel technologies.
- Working with the team to improve and optimize battery and system performance.

### **What we look for:**

- B. Tech/M. Tech in Chemical/Systems/Control Engineering or equivalent.
- Experience of 3-4 years, preferably in Model based system engineering.

### **Required Skills:**

- Understanding of battery chemistries, Failure modes of battery, and Charge and discharge characteristics.
- Experience in mathematical modelling of physical systems.
- Experience in 1D system tools including coding in– MATLAB/Simulink, Simscape, dSpace, CANoe.
- Strong desire to contribute to the development process of innovative new products in the automotive sector.
- Know-how: EVs, Power Electronics, AC-DC/DC-DC converters, and their control, and BMS.
- Identifying issues, providing, solutions, and performing Root Cause Analysis.
- Good communication skills and ability to work independently & contribute as a good team player.