

# Job Notification Form, IIT Delhi

## Company Overview

**Name:** Caterpillar India Private Limited

**Website:** <https://www.caterpillar.com/>

**Company Type:** Core (Technical)

**Description:** For nearly 90 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Customers turn to Caterpillar to help them develop infrastructure, energy and natural resource assets. Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. A lasting legacy of talented and committed employees give Caterpillar its competitive edge. It is our team that has allowed this company to accomplish great things. From the construction of the Hoover Dam, to facilitating communication for the Apollo moon-landing mission, to earthquake relief in Indonesia, our employees have never failed to give customers enduring results through superior service and innovation.

## Job Details

**Designation:** Associate Engineer - EE\_APP

**Type:** Core (Technical)

**Place of Posting:** Chennai, Bangalore

**Job Details:** Description:  
For nearly 90 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Customers turn to Caterpillar to help them develop infrastructure, energy and natural resource assets. Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. A lasting legacy of talented and committed employees give Caterpillar its competitive edge. It is our team that has allowed this company to accomplish great things. From the construction of the Hoover Dam, to facilitating communication for the Apollo moon-landing mission, to earthquake relief in Indonesia, our employees have never failed to give customers enduring results through superior service and innovation

JD 1 - Electrification and Hybrid Power Systems: Simulation and Controls Development

As an Associate Engineer, you will have the opportunity to learn from and contribute in a collaborative team environment in the area of design of new global products and processes. This group enables electrification of Caterpillar products by working on identifying power sources (Battery, fuel cells, PV) to integrating which involves Control's system development for various power conversion systems such as Inverters, Converters, Chargers, etc. In this entry-level engineering position, you will build your technical expertise while learning product development through practical application and staying abreast of innovative technology. You will also build your professional network, engage with peers and receive guidance from mentors in the field.

**Responsibilities:**

In this role, you will also deepen your knowledge base of Caterpillar's products,

- technologies, processes, services and systems, which you will use to:
- Modelling of renewables and battery energy storage system (BESS) with power electronics converters and their controls.
  - Performing power system studies with emphasis on dynamic and steady-state analysis using PSS®E, PSCAD, PowerFactory.
  - Simulate and perform grid connection studies to evaluate the performance of renewables, BESS and their controls.
  - Evaluate Controller requirements, identify subsystems and develop strategies for Power Conversion Systems.
  - Evaluate new products, processes, or systems.
  - Communicate results to customers, suppliers, team members, and other business units.
  - Contribute to the design of new products and processes.
  - Perform product and process maintenance.
- Requirements:
- Good background in Power Systems and Power Electronics.
  - Understanding of power conversion systems.
  - Proficient in simulating and evaluating power converter systems for power system studies.
  - Understanding of open & closed loop control system, controller requirements and calibration.
  - Knowledge of Digsilent PowerFactory, PSCAD/EMTDC, PSS®E and other Power System modelling Software's.
  - Ability to develop user defined dynamic model in PSS®E and/or DSL scripting in PowerFactory.
  - Knowledge of MATLAB/Simulink.
- Caterpillar: Confidential Green
- Understanding of converter and inverter controls, distribution systems and microgrids.
  - Excellent Verbal and Written Communication Skills.
  - Ability to work in teams as well as independently.
- Desirable:
- Knowledge of programming language such as Python and FORTRAN, C++ coding is preferable.
  - Knowledge of grid integration standards such as IEEE/UL.
  - Knowledge of Hardware in loop (HIL) simulations using OPAL-RT and/or DSPACE is preferable.

**Joining By:** 1 June 2022

## Salary Details

<b>CTC:</b>	1,164,277 INR Per Annum
<b>Gross:</b>	983,076 INR Per Annum
<b>CTC Breakup:</b>	Fixed - 10,52,737 Variable - 1,11,540 Total CTC - 11,64,277
<b>Perks / Bonus:</b>	Group hospitalization (self & dependents) - 5,00,000 Group personal accident coverage (self) - 2762748 Term Life Insurance coverage (self) - 2762748
<b>Bond:</b>	Yes

## Selection Process

**Resume** Yes

**Shortlist:****Written Test:** No**Online Test:** Yes**Group Discussion:** Yes**Medical Test:** No**Personal Interview:** Yes**No. of Rounds:** 1**No. of Offers:** 2**Minimum CGPA:** 6.5 and Above with no current arrears

## Eligibility

**Recruiting PHDs:** Yes**Eligible Departments:** M.Tech in Communications Engineering, M.Tech in Computer Technology, M.Tech in Control & Automation, M.Tech in Industrial Engineering, M.Tech in Integrated Electronics & Circuits, M.Tech in Mechanical Design, M.Tech in Power Electronics, Electrical Machines & Drives, M.Tech in Power Systems, M.Tech in Production Engineering, M.Tech in Thermal Engineering, M.S.(R) in Mechanical Engineering, M.S.(R) in Electrical Engineering