ORBIT GRID

Orbit Grid Private Limited

Decouple the growth of Intelligence from the limits of the Earth.
303-B Harsh Residency, Sunpharma Road, Vadodara, 390020
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Job Description

Role: Intern - Spacecraft Thermal Analysis & CAD Modelling **Location:** Remote initially, transitioning to Ahmedabad within 6 months. **Type:** Part-time/Full-time Internship (Leading to Full-Time Role)

About Orbit Grid

As global data processing demands outpace terrestrial land, power, and environmental constraints, Orbit Grid is pioneering the next tier of digital infrastructure: multi-tenant, shared orbital datacenters. We are building the foundational hardware and software stacks that allow high-performance, server-class compute infrastructure to be deployed, shared, and scaled directly in space.

The Engineering Challenge

We work at the intersection of aerospace, high-density compute, and systems engineering to build spaceborne hosting capabilities. Our platforms integrate high-performance electronic hardware operating under massive, steady-state thermal loads with rapid duty-cycle variations. Your role is to design and validate thermal control systems (TCS) that ensure component reliability in the absence of atmospheric convection, managing aggressive heat flux and repeated orbital thermal cycling.

You will assist in advanced modeling for high-capacity heat rejection paths (targeting multi-kilowatt dissipation) using phase-change materials, heat pipes, and fluid loops. This is a problem where first principles matter more than playbooks.

What You Will Do

- **Thermal Modelling:** Perform steady-state and transient thermal analysis of the satellite bus and compute payload layout using industry-standard solvers.
- **CAD Design:** Assist in the mechanical design of the satellite structure, thermal interfaces, and radiator assemblies.
- **Simulation:** Simulate orbital environmental loads (Solar flux, Albedo, Earth IR) to validate passive and active thermal control loops.
- **Component Selection:** Research and characterize space-grade materials (Phase Change Materials, MLI blankets, Graphite sheets).

Required Skills & Tools

- **Thermal Analysis Software:** Proficiency in any one tool: Ansys Icepak, Thermal Desktop, COMSOL Multiphysics, or Siemens Simcenter 3D.
- **CAD Proficiency:** Strong command of SolidWorks.
- **Core Physics:** Deep understanding of conduction, radiation, and multi-phase heat transfer.
- **Academic/Project Base:** Enrolled in or recently graduated from a B.Tech/M.Tech program in Mechanical/Aerospace/Materials Engineering with hands-on project experience in electronics cooling or thermal modeling.

Compensation and Benefits

- Competitive monthly internship stipend.
- Direct path to a full-time offer based on performance.
- Mentorship from senior leadership with deep aerospace and hardware background.
- Office space and hardware testing access upon moving to Ahmedabad.

To Apply: Send your CV, a portfolio demonstrating structural analysis/mechanism design, and a brief write-up to **contact@orbitgrid.in**