

The logo for the Indian Institute for Human Settlements (iihs) is located in the top left corner. It consists of the lowercase letters "iihs" in a white, sans-serif font, with a registered trademark symbol (®) to the upper right. The text is set against a dark red rectangular background.

iihs®

INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

JOB DESCRIPTION

Manager - IoT Lab

About Us

The Indian Institute for Human Settlements (IIHS) is a national education institution committed to the equitable, sustainable and efficient transformation of Indian settlements.

IIHS aims to establish an independently funded and managed national university of eminence for research and innovation focused on the challenges and opportunities of India's urban transition. The proposed IIHS University will be an institution of eminence that will host an integrated programme of quality campus-based education and research, training and lifelong learning for working professionals, distance and blended learning, as well as a whole array of practice and advisory services. The university will have a strong interdisciplinary orientation bringing together theory and praxis that is grounded in the South Asian context and also engages with and draws from knowledge across the globe.

For more information, please see <http://www.iihs.co.in>

About the Kengeri Campus

IIHS' 55-acre mother campus in Kengeri, Bengaluru will consist of academic, research and social infrastructure including student and faculty housing, complemented by the IIHS Bengaluru City Campus, located in North Bengaluru. It will also be India's first Long-Term Urban Ecological Research (LTUER) site. In time, IIHS is expected to develop a number of additional campuses in other states/cities.

These are expected to be best-in-class-in-the-world facilities over the 2020-35 horizon in their sustainability; quality of design, aesthetics and functionality; resource and life-cycle cost efficiency; resilience, security, accessibility and operational efficiency. They will bring together the most advanced future-ready infrastructure and technology, operations and management systems appropriate to India to create a unique teaching-learning, residential and experiential environment that will be an example to India and the world.

They will also be a demonstrator of IIHS core values of inclusion, openness, sustainability and scalable transformatory change. The planning, design, execution and maintenance of IIHS campuses will be sites to experiment, demonstrate and set international standards based on timeless Indian practices, systems, art, culture and heritage. The expectation is that the execution and delivery will provide replicable examples of cost-effective and before-time delivery in India.

IIHS campuses will also provide the opportunity to develop, test and document innovation in conventional and traditional built and infrastructure systems (e.g. renewable energy, water and wastewater, solid waste, e-mobility and ICT) and ecosystem services and their integration via advanced technological systems and one of the deeper IoT implementations in the country. They will be training and teaching-learning environments not only for IIHS faculty, master craft persons and workers involved in campus planning, design and execution but also for IIHS learners, students from other educational institutions and citizens.

In parallel, the IIHS Campus Science team will establish baselines for environmental quality and track environmental and ecological processes and human impact over the decades to provide the evidence base for the sustainable management of the campus and its environs. The Campus documentation team is putting together a detailed multimedia curriculum for

sustainable construction based on the experience of campus planning, development and operations.

Job Description

The Kengeri campus is designed to be an intelligent campus, digitally enabled to ease data collection, flow and storage of data for learning, research, interaction, collaboration and communication. The university buildings and all the spaces (indoors and outdoors) are monitored for environmental data, and comfort is optimised through a close looped control system. Close looped control systems shall be deployed extensively across the campus for controlling temperature, humidity, light, air quality, power consumption, irrigation for the fields, ordering supplies when a set limit is reached, perimeter sensing, CCTV cameras for surveillance, set up of rooms to suit personal preferences etc. An experimental building is being designed and built to test some of the key features in building material and site management for future deployment.

IoT (Internet of Things) systems are also being implemented across the IIHS Bengaluru City Campus (BCC) buildings and the Kengeri campus, along with communication protocols for a real-time sustainability website/dashboard and an IoT lab to calibrate and test different systems. This will become the foundation to a full-blown neural network of IoT systems for the campus.

IIHS is looking to hire a Manager – IoT Lab to help manage the IoT technology programme for the Kengeri campus. The incumbent will work as a key and integral part of the team that develops cutting edge IoT and ICT technology, to enable the campus.

Activities and Tasks

Responsibilities of the Manager - IoT Lab for the Kengeri Campus would include, but not be limited to, the following:

- Project management of the Campus Operating System (OS) software development and being the focal point between the partners;
- Guiding, mentoring and managing the IoT Lab and the IoT team under the overall leadership and direction of the CTO;
- Planning and deployment of tools and techniques at the lab; analysing and rationalising different kind of sensors, microcontrollers, single board computers, power supplies, enclosures and other electronic components, power meters, water flow sensors etc.;
- Optimising the architecture of the IoT neural network with edge computing for controls and management of devices and systems;
- Exploring and evaluating new production techniques; managing the development, prototyping, productionising of hardware with modularity, scalability, resilience and cost;
- Installation of IoT sensors and operationalising the systems; testing and deploying sensors such as Temperature, Humidity, CO2, Air Quality, Occupancy and others, creating edge decisions based on multiple parameters;

- Managing Inventory and procurement;
- Interfacing with the Building Management Systems (BMSs);
- Analysing different communication protocols and networks; establishing communication platforms such as sub systems for interconnect communication;
- Setting up data collection, storage, analysis and processing systems; analysing data and creating visualisation for dashboards;
- Establishing quality paramaters; standardising all applications based on performance, operating conditions and ruggedness for usage;
- Collaborating with the Urban Informatics Lab (UIL) at IIHS to ensure database structure for use cases with the ability to scale and port to the campus data lake; collaborating and coordinating cross functionally with other teams at IIHS including the campus development team, other labs and key enabling functions such as Finance and Operations;
- Providing support to other IIHS activities including academics, research, training, practice, operations and others;
- Participating in all activities of Institution-Building at IIHS; carrying out tasks as assigned by IIHS; and traveling on IIHS work within or outside the country as and when needed.

Structure and Reporting

The Manager-IoT Lab will report to the Chief Technology Officer at IIHS and will be required to collaborate effectively with a diverse group of internal teams and external individuals/organizations, and students.

Person Specification

- An Engineering degree in Electronics and Instrumentation with at least 10 years of relevant work experience; software development and project management experience is essential;
- Deep knowledge and experience of instrumentation and IoT; demonstrable hands-on experience is mandatory;
- Talent for innovation with design from first principles;
- Process orientation;
- Ability to manage stakeholders both internal and external, including vendors and partners;
- Ability to lead teams; ability to work collaboratively with multi-disciplinary teams;
- Excellent communications skills;
- Proficiency in MS Project and MS Office.

This offer is on an exclusive basis, which implies that other professional assignments (whether compensated or not) that bear a potential conflict of interest with IIHS cannot be undertaken.

The search will remain open until the position is filled.

Location

This position is based in Bengaluru and may entail travel to other locations in India.

Review and Assessment

The role and performance of the incumbent shall be subject to normal review and assessment systems at IIHS.

Diversity Policy

IIHS is an equal opportunity employer that encourages women, people with disabilities and those from economically and socially excluded communities with the requisite skills and qualifications to apply for positions.

To apply

If you are interested to explore this opportunity with us, please fill the online application form by clicking [here](#). (You can also click on the “Apply Now” button at the end of the Job Description displayed on the website).

Contact

Please write to us at hr@iihs.co.in if you need any clarifications while filling the online application form.



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