



iihs™

INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

JOB DESCRIPTION

Geographic Information
Systems Software Engineer
– Geospatial 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 for research and innovation focused on the challenges and opportunities of India's urban transition. The proposed IIHS University 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 Geospatial Lab

The Geospatial Lab is the centre for spatial research, consulting and capacity building activities at IIHS. It cuts across programmes and teams integrating spatial technology and methods such as GIS, remote sensing, spatial modeling and web services into practice and consulting services as well as inter-disciplinary research. Its location in the IIHS ecosystem makes the Lab uniquely placed to offer customised project design and delivery, on the one hand, and institutional support, capacity building, training and teaching to a diverse range of learners on the other. As it grows, the Lab plans to become a national hub for geo-spatial sciences and technology that combines technological innovation and process expertise with inter-disciplinary knowledge generation.

Job Description

This position will be responsible for supporting the ongoing research, practice, teaching and capacity building programmes at the Geospatial lab.

Activities and Tasks

The responsibilities would include, but not be limited to, the following:

- Leading and developing new methods using machine learning and cloud computing for advanced geospatial analytics and decision making;
- Working on potential areas of research such as mapping urban areas, land administration, climate change, disaster risk and related fields;
- Ideating and developing a platform for crowd sourcing geospatial data and supervised machine learning;
- Developing customised web, desktop and mobile based GIS and non-GIS applications to expand the labs' services globally;
- Assisting in assessing IT and GIS systems and in developing improved systems of acquisition, processing, and data storage; their transactions and production of relevant outputs; assessing and supporting the improvement of processes & user-interface (both internal and external) used in different states;
- Developing tools and scripts for automating existing processes in proprietary and open source GIS software;

- Translating the experiences from practice into knowledge to contribute to research. This would include publication of journal articles, working papers, case studies, etc.;
- Assisting in teaching, content development and course delivery for training and capacity building initiatives by using sectoral expertise along with various pedagogical approaches;
- Engaging with government officials and other relevant stakeholders in select states on the above aspects;
- Participating in other activities of IIHS, including those related to academics, research and operations.

Structure and Reporting

The Software Engineer – Geospatial Lab will report to the Senior Associate – Geospatial Lab at IIHS and collaborate effectively with a diverse group of internal teams and external faculty/organisations, and students.

Person Specification

This role is an opportunity for a person with minimum experience of two years in Computer Science, possessing an extremely sound understanding of areas in the basic areas of Computer Science such as Algorithms, Data Structures, Object Oriented Design and Databases.

Other qualifications required for this role, include:

- Bachelor's degree in Computer Science or Engineering or related fields;
- Expertise in any of the programming languages such as - Java, PHP, Python, SQL, JavaScript, HTML, CSS etc.; Web Servers such as Apache, MySQL, Geoserver, etc.; Databases like PostgreSQL, PostGIS and MS-Access; statistical packages such as R, open source geospatial software and mapping tools like QGIS, Mapbox, Leaflet, and CARTO;
- Experience in handling server data and assigning privileges to users to access the data from server;
- Experience in implementing MVC architecture for web and desktop applications using opensource software, experience in UI design using Opensource frameworks like Bootstrap and JQuery;
- Good analytical skills and high degree of proficiency in database and other MS Office applications;
- Project management skills, report writing and attention to detail;
- Taking initiatives and having the drive to take on tough challenges, enjoy travel, have good inter-personal communication skills, and be comfortable in working in highly inter-disciplinary teams;
- Excellent communication and language proficiency in English and Hindi;
- Willingness to work in flexible hours from time to time.

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.

Contact

Please email an updated resume, along with a cover letter addressing how you meet the above requirements, to hr@iihs.co.in (*Subject: Software Engineer – Geospatial Lab*).



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