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INDIAN INSTITUTE FOR
HUMAN SETTLEMENTS

# Data Engineer - Urban Informatics 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 Urban Informatics Lab**
The Urban Informatics Laboratory (UIL) is a space within the Indian Institute for Human Settlements where collation, organisation and dissemination of information related to India's urbanisation takes place. The laboratory's mandate is threefold: to build repositories of quantitative, qualitative and spatial data that tackle questions related to the urban space in India; to design and develop means of dissemination using various media that highlight key trends in India's urbanisation story; and, to analyse and study the developments in the urban space in India, and create a space where such studies can be showcased.

For more information, please follow this [link](#).

**Job Description**
This position requires a mix of software development and data analysis skills. If you enjoy coding very much and have a deep curiosity towards data and the stories it could tell you, you are likely to be a great match. Depending on your skills and interests, you could be contributing to different projects at the UIL, which involve a wide variety of tasks like parsing, extracting and integrating information from a multitude of sources, setting up efficient data storage, implementing complex data cleaning and wrangling pipelines, building reproducible machine learning workflows, and creating effective data visualisations.

**Activities and Tasks**
Responsibilities would include, but not be limited to, the following:
- Implementing data extraction scripts to fetch data from censuses, surveys etc. from various websites and databases; this can include tabular data, geospatial data, text, images, etc.;
- Cleaning and enhancing data to make further analyses easier and more meaningful by nontrivial parsing, entity matching, classification, tagging, etc. using ideas and tools from machine learning and Natural Language Processing (NLP);
- Creating data visualisation reports and dashboards to enable effective communication within the team and to the external audience;
- Providing support to others in the team/organisation in automating their analyses or reports using appropriate software packages/tools;

**Structure and Reporting**
The Data Engineer – Urban Informatics Lab will report to the Senior Consultant – Academics & Research at IIHS and will be required to collaborate effectively with a diverse group of internal teams and external individuals/organisations, and learners.

**Person Specification**
Applicants should have 2 – 5 years of experience in a similar role. The specific attributes expected are listed below:
- A Bachelor's/Master's degree that included courses related to software development and/or data analysis. If you have a different educational background, but can demonstrate a strong interest and relevant experience, you are encouraged to apply.
- Mastery in R, Python, Julia or a similar programming language and expertise in manipulating tabular data using tools like dplyr or pandas. You should have a good understanding of software engineering best practices, processes and tools.
- Experience in working with relational databases. Should be familiar with the ideas of normalisation, record linkage, query efficiency, etc. Knowledge of graph databases will be an added advantage.
- A broad understanding of exploratory data analysis and predictive modelling. Familiarity with tools and APIs like caret, scikit-learn, and nltk.
- Experience with data visualisation packages like ggplot, matplotlib. Proficiency with Shiny and/or JavaScript libraries like D3 will be an added advantage.
- Experience with automated web scraping tools will be an added advantage.

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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