

# National Institute of Technology, Durgapur

## Department of Computer Science and Engineering Mahatma Gandhi Avenue, Durgapur 713209, West Bengal

Advt. No.: NITD/CSE/IPOLLUSENSE/Recruitment/2024/03

Date of Advt.: 02.12.2024

Applications are invited from Indian citizens for the following posts to work on a project titled “*i-PolluSense: Intelligent Air & Noise Pollution Sensing and Alert Companion.*” [Website \(https://sites.google.com/view/ipollusense\)](https://sites.google.com/view/ipollusense) funded by IIT Kharagpur AI4ICPS Hub Foundation.

**Project Summary:** This project proposal aims at developing the platform with an affordable device to monitor air and noise pollution in India at the personal/community level. The platform integrates pollution sensors into a single board and uses a TinyML microcontroller for on-device processing. This device connects to the user's mobile phone via Bluetooth Low Energy and provides alerts and personalized recommendations based on the user's health profile and pollution exposure levels. The UI will use structured questionnaires to keep the steps logical and explainable. This device is a significant step in addressing the feature requirement for an environment pollution monitoring device in India at the personal/community level. With the advances in Large Language Models (LLMs) and Natural Language Understanding (NLU), especially in low-resource languages, the idea is to integrate such features using the current state of the art.

### Expected Deliverables:

1. Integrating an affordable air and noise pollution monitoring device
2. Developing reliable sensing using AI models to ensure sensor fault tolerance, sensor calibration and activity recognition
3. Implementing intelligence at the Edge
4. Interactive pollution exposure estimation and action recommender

### Summary of vacant positions advertised:

Sl. No.	Post Category	Number of vacancies	Duration	Fellowship Amount (INR)/month
1.	Data Collector	1	4 Months	15,000.00

\* Details of the general terms and conditions corresponding to each category may be found in the following pages.

### How to apply:

Interested candidates are advised to fill up the Google form latest by **17<sup>th</sup> December, 2024**. Kindly attach a latest curriculum vita. Incomplete applications will be rejected.

**Link to Google form. :-** <http://surl.li/pdhcjm>

Only Shortlisted candidates will be called for an interview via online/offline mode. A list of shortlisted candidates will be displayed on the Institute's website. In case of any query, kindly contact +91-943-4788-158 and [snandi.cse@nitdgp.ac.in](mailto:snandi.cse@nitdgp.ac.in)

Prof. Subrata Nandi (PI – Project i-PolluSense),  
Professor, Department of CSE, NIT Durgapur

### A. Post for Data Collector (One)

Post	Data Collector
Name of the Project	i-PolluSense: Intelligent Air & Noise Pollution Sensing and Alert Companion
Sponsored Agency	AI4ICPS Hub Foundation IIT Kharagpur
No. of Post	One (01)
Duration	04 Months or the end of the project whichever is earlier
Principal Investigator (PI) & Co-PI	Prof. Subrata Nandi (PI); Dr. Sanghita Bhattacharjee (Co-PI); Dr. Sujoy Saha (Co-PI)

#### General Terms & Conditions

Post Description	<ul style="list-style-type: none"><li>* For full time data collection for field work</li><li>* Fixing technical issues</li><li>* deploying and inspecting device faults</li></ul>
Desirable Qualifications/Experience	10+2 Qualification. Usability of Computer, Usage of Android Phones with Application usage
Fellowship	INR 15,000/- per month consolidated
Institute right	The institute has the discretion to restrict the number of candidates to be called for the interview based on screening. Candidates may only be recruited if suitable candidates are found.
Others:	<p>** Selected candidate is expected to play a major role in the fundamental research, simulation and system development activities related to the project.</p> <ul style="list-style-type: none"><li>- Financial assistance for attending Team meetings, Focus area meetings, Project meetings, National conferences etc. will be funded from the project whenever scheduled.</li><li>- The above position is purely temporary, and is for a period of seven months. Selected candidates will not be entitled to claim for regular appointments/absorption in this institute.</li><li>- No TA/DA will be paid for attending the interview (if any).</li><li>- Applications reaching after the specified date will not be considered. Canvassing in any form will disqualify the candidature.</li></ul>