INDIAN INSTITUTE OF TECHNOLOGY BHUBANESWAR

Sponsored Research and Industrial Consultancy (SRIC)

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इस संस्थान के विधुत विज्ञान विद्यापीठ में किए गए विशुद्ध रूप से समयबद्ध शोध परियोजना में निम्नलिखित कार्यभार के लिए निर्धारित प्रारूप पर आवेदन आमंत्रित किए जाते हैं/ Applications are invited on prescribed format for the following assignment on purely temporary contract basis in time bound research project undertaken in the School of Electrical Sciences of this Institute.

1.	अस्थायी पद का नाम/ Name of the Temporary Assignment	:	**JRF/SRF – 1 Post**
2.	अस्थायी अनुसंधान परियोजना का नाम/ Name of the temporary research Project	:	"VISHLESHNAM: A Video Analytics Solution for Crowd Behaviour Analysis Using Multiple Sensors"
3.	फंडिंग एजेंसी का नाम/ Name of the Funding Agency	:	DRDO
4.	पारिश्रमिक/ Emolument	:	JRF: ₹ 37,000/- + 18% HRA p.m SRF: ₹ 42,000/-+ 18% HRA p.m
5.	योग्यता और अनुभव/ Qualification & Experiences	:	As per Annexure-I.
6.	आयु सीमा/Age Limit	:	The age of the applicant should be less than 30 years (for JRF) and 32 years (for SRF) as on last date of submission of application and candidates belonging to SC/ST/OBC/PWD will be given age relaxation as per Government rules.
7.	परियोजना की अवधि/ Duration of the project	:	3 years (19.02.2024 to 18.02.2027)
8.	नियुक्ति की अवधि/ Duration Appointment	:	Initially for one year which may be extended based on performance.
9.	चयन प्रक्रिया/ Selection Process	:	The selection process will be based on interview.

Interested eligible persons may apply through online application system on or before **7th April 2024.**

To complete the registration process, please visit the Institute's website: **www.iitbbs.ac.in/jobs-iitbbs.php** After entering to the website, select the option **'Recruitment for Research Project Work'** and fill up the online application form after completion of registration process.

Selection to the post will be done through interaction only from among the shortlisted candidates. There is no need to send hard copy of the application. The shortlisted candidates will be intimated through email only for interview.

Sd-
उप कुलसचिव (श्रीक)
Dy. Registrar (SRIC)

Project Title: VISHLESHNAM: A Video Analytics Solution for Crowd Behaviour Analysis Using Multiple Sensors
Funding Agency: IRDE, DRDO, Govt. of India
Duration: 3 years (19 February 2024 – 18 February 2027)
Post: JRF/SRF
Number of Posts: 01 (ONE)
Salary: JRF: 37000 + HRA (18%) (p.m.), SRF: 42000 + HRA (18%) (p.m.)
Project Investigator: Dr. Debi Prosad Dogra, Associate Professor (Computer Sc. & Engineering)
Website: https://www.iitbbs.ac.in/profile.php/dpdogra
School: School of Electrical Sciences
Institute: IIT Bhubaneswar
Contact: dpdogra@iitbbs.ac.in

Qualification:
JRF: **BE/BTech/MSc (CSE/IT/AI/Data Science) with below 30 years of age.**
SRF: **ME/MTech (CSE/IT/AI/Data Science) with 2 years' experience in relevant discipline and age below 32 years.**
Desirable Skillsets/Experiences/Other Information: Candidates with BE/BTech/MSc are preferably be qualified in GATE (CS or DA disciplines). Knowledge in computer vision algorithms such as video object detection, tracking, segmentation, camera calibration, OpenCV, Deep Learning frameworks (knowledge on Tensor Flow-Keras, etc, will be given preference). The candidate should be well conversant with the open source development frameworks with an intent of high quality research publications in reputed CV-related conferences/journals. Age relaxation may be given to CS/ST/PWD categories as per the GoI norms. **Candidates can enrole to the PhD program subject to qualifying through the admission process of the institute**.

Project Objectives: (i) Development of AI algorithms and implementation of related software to accurately detect suspicious activities of intruders targeting women in isolation (training centers and restricted areas) and in the presence of crowded environment. (ii) Innovate and engineer AI-driven methodologies for automatic alarm generation to help the women in distress at designated locations. (iii) Detection of non-standard or improperly installed number plates on the vehicles moving within a restricted surveillance zone. (iv) Development of deep learning model to precisely count males and females in crowded gatherings and perform activity analysis. Complete Design of People Analytics. Face recognition, Head count, and crowd detection and formation analytics. Gender identification – male/ female, appearance, disappearance of a person of interest or general person. Age suggestion- child, adult or old person, predicting crime against female/child as per emotional and / gesture analysis and location. Accurate detection of suspicious activity towards women in vulnerable areas, ensuring timely alerts for improved security in defense settings.
AI-driven identification of non-standard number plates for enhanced vehicle monitoring and threat identification within defense premises. Innovative emergency gesture recognition for swift threat detection and crisis response in designated locations. Deep learning model for accurate crowd demographics and activity analysis, optimizing crowd

management in defense scenarios. Potential adaptation of AI algorithms and methodologies for diverse defence applications, including border surveillance and military base security.