भारतीय प्रौद्योगिकी संस्थान जम्मू
INDIAN INSTITUTE OF TECHNOLOGY JAMMU

भारतीय प्रौद्योगिकी संस्थान जम्मू
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Indian Institute of Technology Jammu
Jagti, NH-44, PO Nagrota, Jammu, J&K 181221

विज्ञापन संख्या /Advt. No.: IITJMU/R&C/RP00204/A-154 **दिनांक / Date: 03.12.2025**

परियोजना कर्मचारियों के लिए विज्ञापन / Advertisement for project staff

"***Real-time monitoring and control of HVAC systems, supported by comprehensive data-library creation and dedicated IoT hardware development***" नामक अनुसंधान एवं विकास परियोजना पर काम करने के लिए **RA-III and Project assoiate-I** के पद के लिए भारतीय उम्मीदवारों से आवेदन आमंत्रित किए जाते हैं।

Applications are invited from the Indian candidates for the post of **RA-III and Project assoiate-I** to work on the R&D project titled "**Real-time monitoring and control of HVAC systems, supported by comprehensive data-library creation and dedicated IoT hardware development" sanctioned by, World bank**.

A.

विवरण / Details	**सूचना / Information**
Post	RA-III
No. of Positions	One
Area of Specialization	Wireless Communication, IoT Systems, PCB Design, and Embedded Systems. Proficient in communication protocols such as RS485, SPI, I²C, and UART, with experience in developing data libraries, device interfaces, and solutions suitable for IoT and industrial applications.
Duration	Initially 31.03.2026; extendable based on satisfactory performance; co-terminus with project
Consolidated Salary per Month (INR)	₹67,000 + HRA as applicable

B.

विवरण / Details	**सूचना / Information**
Post	Project Associate-I
No. of Positions	One
Area of Specialization	Full-stack development using React.js, Next.js, Node.js, Firebase, REST APIs, Web Sockets, and NoSQL databases. 3D digital-twin environments using Blender and Three.js, and integrate AI and ML tools for intelligent data processing and automation
Duration	Initially 31.03.2026; extendable based on satisfactory performance; co-terminus with project
Consolidated Salary per Month (INR)	**(i)** ₹37,000 + HRA as applicable (NET/GATE or National-level exam qualified) **(ii)** ₹30,000 + HRA as applicable (Others)

आवश्यक योग्यता और मानदंड / Minimum Qualification and Criteria For RA-III:

Candidates must hold a four-year **Bachelor's degree** with a **minimum of 75% marks (or 7.5/10 CGPA)** throughout their academic career starting **from Class XII,** in Electronics and Communication Engineering, Electronics and Telecommunication Engineering, Electrical Engineering, Electrical and Electronics Engineering, or Computer Science and Engineering**.** A valid GATE score is preferred.

And

Eight years 'experience in R&D in industrial or academic institutions, S&T organizations, or in scientific activities and services, out of which four years must be in science and technology programme planning, development, and co-operation.

OR

Candidates must hold an **M.Tech/M.E. degree with a minimum of 75% marks (or 7.5/10 CGPA)** throughout their academic career starting **from Class XII**, in Embedded Systems, Electronics and Communication Engineering, VLSI, IoT, Wireless Communication, Computer Science, or a related discipline, along with a B.Tech/B.E. degree in Electronics and Communication Engineering, Electronics and Telecommunication Engineering, Electrical Engineering, Electrical and Electronics Engineering, or Computer Science and Engineering. A valid GATE score is preferred.

And

Six years 'experience in R&D in industrial or academic institutions, S&T organizations, or in scientific activities and services.

OR

Candidates must hold a **Doctoral Degree (Ph.D.)** in Embedded Systems, Electronics and Communication Engineering, VLSI, IoT, Wireless Communication, Computer Science, or a related field, **along with an M.Tech/M.E. degree** in any of the above disciplines and **a B.Tech/B.E. degree** in Electronics and Communication Engineering, Electronics and Telecommunication Engineering, Electrical Engineering, Electrical and Electronics Engineering, or Computer Science and Engineering.

आवश्यक योग्यता और मानदंड / Minimum Qualification and Criteria for Project Associate-I:

Candidates must have a **B.Tech/B.E. degree** in either Electronics and Communication Engineering or Computer Science and Engineering, with a **minimum of 60% marks (or 6.5/10 CGPA)** throughout their academic career starting from Class XII. **A valid GATE score is preferred.**

वांछित योग्यता / Desired qualification for RA-III:

- **Doctoral Degree (Ph.D.)** in IoT Systems, Wireless Communication, Embedded Systems, or a closely related field.
- **M.Tech/M.E. degree** in IoT, Embedded Systems, Communication Engineering, or related areas.

- **B.Tech/B.E. degree** in Electronics and Communication Engineering, Electrical Engineering, Electrical and Electronics Engineering, or Computer Science.
- Strong understanding of **IoT architectures**, sensor networks, and device integration.
- Experience in **data library creation**, device interfacing, and embedded communication for HVAC applications.
- Skills in **C, Python, or MATLAB** for developing IoT data processing logic, device drivers, and communication modules.

वांछित योग्यता **/ Desired qualification for Project Associate-I :**

- **B.Tech/B.E. degree** in Electronics and Communication Engineering, Electrical Engineering, Electrical and Electronics Engineering, or Computer Science and Engineering.
- Strong understanding of Full Stack Development.
- Experience in **data library creation**, device interfacing, and embedded communication for HVAC applications.
- Skills in **React.js, Next.js, Node.js, Firebase, REST APIs, WebSockets, and NoSQL databases** for developing IoT data processing logic, device drivers, and communication modules.

परियोजना का संक्षिप्त उद्देश्य / **Brief Objective of Project**:

The objective is to develop computational methods and tools that enable accurate modeling and seamless integration of IoT-based sensors and actuators used in HVAC systems. The work involves building structured data libraries that include device parameters, sensor behavior, communication mappings, and operational datasets relevant to HVAC environments. It also requires implementing real-time monitoring and control through web-based platforms and digital-twin environments. In addition, the role includes supporting the development and testing of communication modules for IoT-enabled HVAC monitoring and control.

नौकरी का विवरण / **Job Description**:

We are seeking a highly skilled and versatile Full-Stack Developer with strong expertise in end-to-end software development, full stack development, React.js, Next.js, frontend and backend coding, Firebase, API development, WebSocket programming, REST APIs, NoSQL databases, and Node.js. The ideal candidate must be proficient in 3D technologies such as Blender and Three.js for digital twin development, and capable of building modern web applications using Tailwind CSS and Bootstrap. The role requires hands-on experience in developing real-time data collection software, programming Arduino and ESP32 microcontrollers, and extracting data from energy meters and BTU meters. A solid understanding of HVAC systems, including AHUs, Chillers, VFDs and VRVs, is essential, along with the ability to create power-saving algorithms, automation scripts, and schedulers for HVAC optimization. Candidates should be experienced in managing CI/CD pipelines, GitHub repositories, and cloud deployments on

platforms such as Render and Railway, while ensuring robust, scalable, and efficient software solutions across the entire development lifecycle.

The selected candidate is expected to work on designing and implementing IoT device interfaces for HVAC systems, including sensors for temperature, humidity, air quality, and flow control. The candidate will develop and maintain data libraries for HVAC IoT devices, incorporating calibration data, sensor characteristics, and communication mappings. Responsibilities also include creating communication modules using RS485, SPI, I²C, UART, Wi-Fi, BLE, or other IoT protocols, along with supporting the prototyping and testing of embedded hardware for smart HVAC monitoring and control. The position requires integrating IoT devices with cloud or local dashboards for data logging and real-time monitoring, as well as preparing detailed documentation and test reports covering hardware performance, communication reliability, and system-level HVAC integration

ऊपरी आयु सीमा / Upper age limit: 35 years

(आयु में छूट: एससी/एसटी/ओबीसी/महिला और शारीरिक रूप से विकलांग उम्मीदवारों के लिए ऊपरी आयु सीमा में 5 वर्ष तक की छूट है)।
(Age relaxation: Upper age limit is relaxable up to 5 years for SC/ST/OBC/women and physically handicapped candidates).

आवेदन प्रक्रिया / Application Process:

मांगे गए विवरण, प्रमाणपत्रों की स्कैन की गई प्रतियां, अन्य सहायक दस्तावेजों के साथ विधिवत भरा हुआ आवेदन पत्र **15.12.2025** तक ऑनलाइन पोर्टल)https://apply.iitjammu.ac.in/#/home) के माध्यम से अपलोड किया जाना चाहिए। कृपया संदर्भित आवेदन पोर्टल पर के टैब [एसआरएफ/जेआरएफ/स्टाफ प्रोजेक्ट/अनुबंध] करें। आवेदन से माध्यम
Duly filled application form along with the requested details, scanned copies of certificates, other supporting documents, should be uploaded through the online portal (https://apply.iitjammu.ac.in/#/home) latest by **15.12.2025** Please apply through the [contract/project staff/JRF/SRF] tab on the referred application portal.

महत्वपूर्ण बिंदु / Important Points:

1. आवेदक प्रस्तुत की गई जानकारी, अन्य दस्तावेजों और तस्वीरों की प्रामाणिकता के लिए जिम्मेदार होगा।
The applicant will be responsible for the authenticity of the information, other documents, and photographs submitted.

2. केवल निर्धारित योग्यता रखने से यह सुनिश्चित नहीं हो जाता कि उम्मीदवार को साक्षात्कार के लिए बुलाया जाएगा। उम्मीदवारों को योग्यता और परियोजना की आवश्यकता के आधार पर शॉर्टलिस्ट किया जा सकता है।
Merely possessing the prescribed qualification does not ensure that the candidate will be called for an Interview. The candidates may be shortlisted based on merit and need for the project.

3. शॉर्टलिस्ट किए गए उम्मीदवारों को साक्षात्कार के बारे में ई-मेल द्वारा सूचित किया जाएगा। इसलिए, उम्मीदवार को अपने आवेदन में वैध ई-मेल आईडी और फोन नंबर की जानकारी देनी होगी।
Shortlisted candidates will be informed by e-mail about the interview. So, the candidate must provide valid e-mail IDs, and phone number information in their applications.

4. शॉर्टलिस्ट किए गए उम्मीदवारों को साक्षात्कार तिथि पर एक अद्यतन सीवी और अपनी शैक्षणिक योग्यता का समर्थन करने वाली मार्कशीट/प्रमाणपत्र की मूल और सत्यापित फोटोकॉपी के साथ साक्षात्कार के लिए उपस्थित होना होगा। केवल शॉर्टलिस्ट किए गए उम्मीदवारों को साक्षात्कार के लिए बुलाया जाएगा। साक्षात्कार का समय शॉर्टलिस्ट किए गए उम्मीदवारों को ई-मेल द्वारा सूचित किया जाएगा। साक्षात्कार ऑनलाइन/ऑफ़लाइन प्लेटफ़ॉर्म का उपयोग करके आयोजित किया जाएगा।
Shortlisted candidates must present themselves for the interview on the interview date with an updated CV and original and attested photocopies of mark sheets/certificates supporting their academic qualifications. Only shortlisted candidates will be called for the interview. The time of the interview will be informed to the shortlisted candidates by e-mail. The interview will be held using the online/offline platform.

5. पद पर शामिल होने के लिए बुलाए गए उम्मीदवारों को अपने स्वयं के फंड पर आईआईटी जम्मू पहुंचना चाहिए। यदि नौकरी की पेशकश की जाती है तो पद पर शामिल होने के लिए टीए/डीए की अनुमति नहीं है।
Candidates called for joining the position should reach IIT Jammu on their own fund. TA/DA is not permissible to join the position if job is offered.

6. जो अभ्यर्थी पहले से ही कार्यरत हैं, उन्हें चयनित होने पर अपने नियोक्ता से कार्यमुक्ति प्रमाणपत्र प्रस्तुत करना होगा।
Candidates who are already employed should produce a relieving certificate from their employers if selected.

7. विधिवत भरा हुआ आवेदन प्राप्त करने की अंतिम तिथि **15.12.2025** ।
The last date for receiving the duly filled-in application **is 15.12.2025.**

8**.** साक्षात्कार की तारीख शॉर्टलिस्ट किए गए उम्मीदवारों को ईमेल के माध्यम से सूचित की जाएगी ।
The date of the interview will be informed to the shortlisted candidates through email.

9. उम्मीदवार को शैक्षणिक योग्यता, अनुभव आदि के संबंध में सभी दस्तावेज अपलोड करने होंगे।
Candidate must upload all the documents with respect to educational qualification (10, 12, graduation, post-graduation, PhD. and also experience, etc.

पत्राचार के लिए पता /Address for Correspondence :
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