

Postdoctoral Fellow – AI & High-Performance Computing Research Centre (AHRC), IIT Bhubaneswar**Position Overview**

The AI & HPC Research Centre (AHRC) at IIT Bhubaneswar invites applications for a Postdoctoral Fellow position in Artificial Intelligence (AI), High-Performance Computing (HPC), and related fields to contribute to cutting-edge research in railway structure health monitoring. The ideal candidate will have expertise in AI, Machine Learning (ML), Deep Learning, and image/signal processing techniques, as well as a background in robotic design and automation.

Key Responsibilities

- Lead and contribute to innovative research focused on railway structure health monitoring using AI, ML, and advanced image/signal processing methods.
- Develop algorithms for predictive maintenance and anomaly detection in railway infrastructure.
- Design and implement systems that combine robotics and automation for data collection and analysis.
- Publish high-quality research in peer-reviewed journals and present findings at international conferences.
- Collaborate with multidisciplinary teams and industry partners for real-world application of research findings.

Areas of Research Focus

- Artificial Intelligence (AI) & Machine Learning (ML)
- Deep Learning
- Image and Signal Processing
- Robotics & Automation
- Algorithm Development
- Data Analysis & Modeling
- Research Publication & Scientific Communication

Eligibility Criteria

- A MTech/PhD degree in Engineering.
- Strong foundation in AI, ML, Deep Learning, and signal/image processing techniques.
- Experience in robotic design and automation systems.
- Proficiency in programming languages such as Python.
- Prior experience in railway infrastructure or structural health monitoring will be an advantage

Duration & Benefits

- **Tenure:** Initially for 1 year, extendable upto 5 years based on annual performance review.
- **Fellowship:** Competitive salary as AHRC norms.

- Documents to be submitted online

Application should include : -

- i. Detailed CV
 - ii. Summary of Ph.D. work (one page)
 - iii. Research proposal (maximum two pages)
 - iv. List of publication.
 - v. All relevant educational certificates & marksheets.
- **Facilities:** Access to state-of-the-art HPC infrastructure, research collaborations, and funding opportunities, working with IIT students.

Selection Procedure:

Interested candidates are encouraged to send an email to career.ahrc@iitbbs.ac.in and mark a copy to skpanda@iitbbs.ac.in with the aforementioned documents and a brief cover letter outlining their relevant research experience and motivation for applying to the position. Candidates will be shortlisted based on eligibility criteria, academic record, relevant experience, and overall fit with the position. Only shortlisted candidates will be contacted for an interview by the selection committee. Meeting the criteria does not guarantee an interview call. If no suitable candidate is found, the position will remain vacant, and a new advertisement may be issued at a later time.

For more details, visit <https://www.iitbbs.ac.in/index.php/ahrc/ahrc-careers/>