



Data Imaging Scientist

Conceptualized in the year 2004 as a philanthropic initiative for the Eastern and North-Eastern parts of India and the neighboring countries, the Tata Medical Center (TMC) started operations in Kolkata on May 16, 2011. The hospital is governed by a charitable trust – Tata Medical Centre Trust. It is an integrated Oncology facility with well-trained professional staff and equipped with modern facilities and the most contemporary medical equipment. The hospital was designed by Cannon Design, a renowned architectural firm from North America. It is located on 13 acres of land at New Town in Kolkata, West Bengal.

The hospital is an integrated Oncology facility with well-trained professional staff and equipped with modern facilities and contemporary medical equipment. The Hospital, with a capacity of 437 beds, serves all sections of the society, with 75% of the infrastructure earmarked for subsidized treatment for the underprivileged sections. It provides a wide spectrum of services from diagnosis and therapy to rehabilitation and palliative support. The Institution's objective is to excel in service, education and research.

The Department of Radiation Oncology is actively engaged in research using radiomics and imaging and is the pioneer of India's first image bank - CHAVI - Comprehensive Archive of Imaging in Oncology. This project, jointly developed in collaboration with IIT Kharagpur is currently being managed and maintained by the department. The department is also actively engaged in the integration of Artificial Intelligence in the Radiotherapy planning process and is pioneering one of the first open source automatic segmentation pipelines in India. The department has an active research and education portfolio and has several extramural funded active research projects.

We seek candidates with experience in software languages like javascript, java, and python. Candidates with experience in developing front ends using a framework like Vue, React, or Svelte kit will be preferred. Please do not forget that your role will not only be limited to front end development as you will be expected to work with our team of data imaging scientists in the development and maintenance of the software products we are developing. The department offers a collaborative and cooperative work environment where your skills and expertise will be valued. We prize honesty, integrity and hard work in the candidate.

To fulfil the above objectives, the Department of Radiation Oncology at Tata Medical Center, Kolkata invites applications from qualified candidates for the post of **Data Imaging Scientist** with specialization in Front end development and DeVos.

Job Purpose

- Maintenance and upgradation of the CHAVI and the CHAVI de-identification system in collaboration with IIT Kharagpur and other associated / ancillary projects as may be decided by the department.
- Oversight of data curation and labelling for facilitating projects using the image biobank.
- Assist in the drafting of research protocols for imaging biomarkers.
- Develop and maintain robust front ends (server / client) for the applications being developed

as a part of CHAVI project.

- Conduct analysis using ML and Deep learning techniques for existing and future imaging biomarker research projects viz. HYPOR, INTELHOPE, Brain tumour radiomics etc.
- Participate in a multidisciplinary team, to ensure consistent, efficient, and standard-compliant research and clinical trials.
- Liaise with internal and external stakeholders to achieve growth in clinical trial activity involving imaging biomarker research
- Promotion of high-quality research and delivery of exceptional, evidence-based healthcare.

Job description:

Strategic

- Lead the CHAVI to ensure adherence to the highest standards of research conduct.
- Liaise with the departmental investigators to enable the growth of investigator-initiated studies involving imaging biomarkers.
- Develop and update policies and standard operating procedures for the CHAVI bio-bank and de-identification system as per institutional, state, and national regulations.
- Represent the CHAVI project in various internal and external committees.
- Assist investigators in identifying and applying for competitive research funding.

Research Activities

- Combine strong knowledge of medical imaging, data science, and development of pipelines to process longitudinal multimodality imaging (XR, CT, MRI, PET)
- Build state-of-the art computer vision solutions using Deep learning frameworks such as Tensor Flow and Pytorch
- Research and implement novel deep learning architectures/algorithms as part of building a disruptive product
- Work in a collaborative environment with other scientists, engineers, and clinicians

Education and Training

- Develop and implement training for students in the department wishing to use the CHAVI project.
- Present and publish results of new processes implemented in peer reviewed publications and conferences.

Qualification & Experience:

Qualifications

B. Tech/ M. Tech, Masters in biomedical engineering, medical physics, computer sciences, electrical engineering, or related scientific field. PhD is desirable.

▪ Essential experience

1. Proficiency in front end development frameworks like React / Javascript / Vue etc.
2. Experience with backend development
3. Experience with git and similar coder versioning software
4. Proficiency in using Computer Vision and Deep Learning toolkits
5. Experience programming in Python and Scala or JAVA

▪ Desirable experience

1. Experience in 2D/3D domains (time series, object tracking etc.)
2. Experience with related AWS or Azure services
3. Strong ability in problem solving and driving for results

Knowledge and Skills

- Advanced digital literacy and computer skills.
- Strong communication and data presentation skills
- Strong personal interest in learning, researching, and creating new technologies
- Honesty, integrity, respect for confidentiality and desire to excel.
- Strong personal time management and organizational skills.
- Through understanding of the basics of project management
- Ability to communicate effectively with the team and liaise with different stakeholders in the department.
- Interpersonal skills to ensure effective team building in the clinical research unit.
- Ability to perform with tight deadlines, with minimal supervision
- Eager to apply problem-solving skills and exercise independent judgment.

Type of Employment – Off Roll under Third Party Payroll.

***For more details and application forms, please log on to our website today:
www.tmckolkata.com**

Please Email or Post applications by 8th December 2024 to:

Mr. Suvasish Mukherjee, Head-Human Resources, Tata Medical Center, 14 MAR (EW), New Town, Kolkata – 700160.

Email – suvashish.mukherjee@tmckolkata.com