Image Analyst

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.

Over the last few years radiology has undergone several major changes. The changes in hardware are already available in our hospital. We have trained technicians to operate them under supervision of doctors with the help of application specialists from vendors.

The changes in software are many and they are also available in our department. Unlike the hardware, many of the softwares are learned on core computing principles such as Python, Java, Matlab etc. Several radiology post processing software tools also require background software and image processing knowledge.

The post processing softwares and tools help us in mainly creating better images for qualitative assessment and more importantly quantification.

1. Post treatment changes in a rectal cancer is traditionally performed by T2WI sequence on MRI. This is an anatomical and subjective assessment. Perfusion MRI can further quantify the response by providing parameters like Ktrans, MEP etc. The phamacodynamic models to calculate the parameters are many. An image analyst and a post processing expert can help in deriving the parameters from the source data in tools such as Matlab.
2. This type of analysis is also possible in neuro-oncology in post treatment response, lung cancer primary tumor predictive characterisation and response assessment as well as any other tumor.
3. Post pazopanib assessment of response in metastatic renal cell cancer is performed by a criterion called MASS. This requires contrast administration. Most of these patients develop varied degrees of renal failure precluding contrast administration. The new way of assessment is to use a MRI sequence called Pseudo arterial spin labelling. Calculation of quantitative parameters derived from source images requires knowledge of noise cancellation and post processing on Python.
4. Using advanced processing skills to denoise images, hence increasing signal to noise ratio.

5. Oxygenation of tumors can be calculated by functional MRI. The sequence called Blood Oxygenation Level Dependant Imaging (BOLD) was attempted in our department for the Symec project. We can perform this for various other tumors. The processing of the images needs MATLAB, specialised software that is available with us and needs specific expertise.

To fulfil the above objectives TMC invites applications for the position of **Image Analyst.**

Qualification: B.E, B.Tech, M.Tech, BCA, MCA or equivalent

Experience: 2 years of minimum experience in the relevant specialty.

Brief Job Description:

➢ For a candidate to fit this role he/she should be able to handle the following softwares:
   a. Osirix
   b. Texture
   c. Matlab
   d. Python
   e. SPSS
   f. Java
   g. Myrian fat and lung solutions
   h. Denoising Softwares
➢ Experience in image processing is essential.
➢ Experience in development of algorithms, denoising and machine learning are desirable.
➢ The candidate is expected to be available on call on Sundays or holidays only as and when required.

The remuneration will be commensurate with years of experience.

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

You may also Email or Post applications by 15th October 2023 to:

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