Reliability estimation of medical equipment based on big data of Internet of Things

Project Description: In recent years, the Internet of Things of hospital medical equipment are gradually established. However, the reliability estimation of medical equipment based on the Internet of Things is still in the early stage. In this project, the anomaly and failure indicators of medical equipment will be extracted based on the multi-modal operation data of the medical equipment. Artificial intelligence models will be established to predict the occurrence time and severity of anomalies and failures of medical equipment. Our goal is to achieve intelligent prediction of medical equipment failures and anomalies through these studies and lay the foundation for intelligent and efficient management of medical equipment in medical institutions.

Job Description: We are looking for a scientific research assistant with a solid academic foundation, self-motivation, interest in medical engineering projects, and willingness to carry out research work. The ideal candidate should have a relevant background in statistics, data science, etc., and be passionate about working in the field of Medicine & Engineering Combination. Candidates will conduct literature review, data collection, data processing, model development and implementation. Candidates will collaborate with the PI and other team members on publishing academic papers in well-known journals. Through the Focused Research Extension Program (FREE), candidates will have the opportunity to acquire the professional and practical skills required to carry out research work, thereby increasing the likelihood of being admitted to a doctoral or master's degree program and the chance of obtaining a long-term job in industry. The PI can recommend outstanding research assistants to study for a doctoral degree at well-known universities in the United States, Hong Kong and Mainland China.

The term of employment spans two years, and the contract is structured for annual renewal.

Qualifications:

- Bachelor’s degree or above in industrial engineering, statistics, data science, computer engineering, applied mathematics and other related majors.
- Self-motivated, with good English writing skills and enthusiasm for artificial intelligence models
- Proficiency in Python/R.