**A unique opportunity to join the healthcare revolution!**

## **Who we are:**

## Siemens Healthineers is a leading global medical technology company with over 50,000 dedicated colleagues in over 70 countries who are driven to shape the future of healthcare. Around 24,0000 patients per hour across the globe benefit every day from our innovative technologies and services in the areas of diagnostic and therapeutic imaging, laboratory diagnostics and molecular medicine, as well as digital health and enterprise services.

## **Our culture:**

## Our culture embraces different perspectives, open debate, and the will to challenge convention. We aspire to lead the change in our industry rather than just react to it. That’s why we invite you to take on new challenges, test your ideas, and celebrate success. Our 7 Principles are:

* We say what we do/We do what we say!
* Missed opportunities are our biggest risks!
* We don't compromise on quality!
* We lead by being LEAN!
* We listen more than we talk!
* Today is about tomorrow!

Come and join our team as Engineer-design & development tohelp create the future of healthcare!

## **Advanced Therapies Business**

Our product Sensis is a state-of-the art recording system used in hemodynamic and electrophysiology procedures of Cardiac Cath-Lab and Interventional radiology labs. Sensis contains a core acquisition system and an information system. The acquisition system acquires, processes and displays the ECG, ICEG and IBP signals. Digital Signal processing and special algorithms are used to derive the clinical values for detecting and treating the lesions. The acquisition system interfaces with multiple other devices like mapping point system, ablation devices etc. The Information system interfaces with hospital IT systems to register patient data and clinical procedure data for reporting, inventory management and analytics.

## **Position A) Digital signal processing developer:**

## **Development of new signal processing** techniques to adapt to new workflows. Use machine learning techniques to detect the ECG and IBP morphologies and assist in clinical workflows

* Design an intelligent system for segregating the clinical signals from other noises and clinically insignificant data.
* Support the development and release activities of next generation Sensis system.

**Technological Stack**: Python, Matlab, ML.NET, C++/C#. Knowledge in OOAD, SDLC methodologies.

## **Position B) Cardiac Information System developer:**

## **Design** data models for hospital customizations. Use cloud storage and analytics to provide clinical, lab usage and inventory statuses and predict the needs.

* Develop a smart review/reporting station to review the procedure and support in generating electronic report.
* Support the development and release of next generation Sensis system.

**Technological Stack**: C#, Microsoft R, Azure development stack, Angular, Web technologies (using HTML5). Knowledge in OOAD, SDLC methodologies.

## **Digital Health Business:**

The goal of “Digital Health” business at Siemens Healthineers is to enable our customers, through our solutions and offerings, in their endeavors towards digitalization of healthcare. We offer you a dynamic work environment with opportunities to go beyond your comfort zone in order to grow personally and professionally. AI-powered systems and solutions empower our customers to automate, standardize, and individualize their care delivery and management. The outcome: intelligent data - for enhanced efficiency and productivity, higher quality of care, and a better patient experience.

## **Position A) Full Stack Development**

## **Who are we looking for:**

We want bright minds who are excited to develop new ideas and drive our success in the healthcare world. You:

* Will be responsible to create state of the art technology prototypes and actively contributing to innovation streams
* Wil actively contribute to software design for realizing optimal solutions in Digital Healthcare offerings.
* Should have good understanding of business requirements and coming up with appropriate technical solutions for AI based products.
* Will be responsible for the implementation of features, while adhering to highest coding and quality standards
* Will be responsible for design and implementation of (unit/integration) tests using TDD / BDD approach to deliver high quality
* Will be responsible creating and reviewing relevant specifications while conforming to defined processes

## **Knowledge and capabilities:** You should:

## Be equipped with excellent programming skills - C# .Net Core and latest technologies in Microsoft stack

* Have solid understanding of OOPS, design principles & patterns
* Have thorough understanding of inter-process communication, multi-threading and data-structures
* Have basic knowhow of Test-Driven Development / Behavior-Driven Development and other extreme programming methods
* You should have familiarity of software engineering processes & methods.

## **Position B) Data Science Engineer**

## **Who are we looking for:**

* Research, design and implement Machine Learning algorithms for Precision Medicine, Clinical decision support and Machine utilization.
* Leverage structured and unstructured data to build and validate the models for Machine Learning.
* Work with customers, business partners to understand algorithms, workflow requirements and deliver prototypes, product-ready solutions.

## **Knowledge and capabilities:**

* Strong quantitative background (Statistics, Probability, Linear Algebra)
* Strong knowledge of advanced techniques in Machine Learning, Deep Learning, Text and Stream analytics.
* Strong knowledge in programming using Python and Python packages (Numpy, Pandas, Matplotlib, Seaborn, Sci-kit Learn, Keras and Gensim)
* Familiarity of Big Data Platforms (Hadoop, Pig, Hive etc.)

## **Medical Imaging Business**

The data analytics team within SHPL is looking for data scientists with a background in machine learning (ML) and deep learning (DL) technologies to help design and build innovative AI solutions and products in Healthcare domain. The successful candidate will be part of a team building cutting edge AI solutions that rely on AI and ML techniques including but not limited to computer vision, deep learning, natural language processing and machine learning.

## **Data Analytics & Simulation Professional**

## **Who are we looking for:**

* Requirement gathering from Business Functions & suggesting analytical solutions/approach for implementation
* Collaborate with Engineering Team and Architects to deliver complex production level solutions
* Gather, process, analyze and extract conclusions out of complex, high-volume, high-dimensional data coming from varying sources
* Serve as a resource for other individuals on the team-- mentoring junior engineers and advising leaders

## **Knowledge and capabilities:**

* **Statistical Skills**
  1. Deep machine learning models, using a deep graph with multiple processing layers & composed of multiple linear and non-linear models / techniques
  2. Implemented advanced techniques for outlier and anomaly detection including applications of clustering, learned rules
  3. Advanced knowledge of machine learning algorithms, practical exposure of parameter and performance tuning, Dimensionality Reduction, High Dimensionality Modelling, Ensembling, Feature Engineering
* **Data Skills**
  1. Data Extraction from EDW/Big Data Platform, Dataset Preparation (creation of base data, aggregation, transformation), performing EDA
  2. Strong skills for data wrangling / analysis / visualization / modeling
  3. Good Logical / Analytical / Quantitative /Reasoning skills
  4. Desire to learn new tools & techniques and follow the latest thinking globally in academia and the business world
* **Tools & Technologies**
  1. Strong understanding of SQL language for data management
  2. Exposure to MongoDB
  3. Knowledge of R or Python Libraries - Scipy, Numpy,Pandas, IPython, Scikit-learn
  4. Good knowledge of deep learning hardware and software - GPUs, TPUs and CPUs, TensorFlow, PyTorch, Caffe

## **Ultrasound Scanner Business**

## At Siemens Heathineers, we develop backend software for Siemens cardiovascular premium Ultrasound scanner. Our cardiology clinical applications are the USP for our scanner. These applications render detected 2D/3D models on real time systems and help the cardiologists to diagnose heart problems.

## **Who are we looking for:**

## Incumbent skills in GPU programing will enhance the 2D/3D images to be rendered, manipulated, analyzed by physicians to diagnose anomalies in Ultrasound images. Responsibilities include:

## Develop reusable components for rendering 2D/3D geometric objects/models

* Optimize and improve existing rendering components
* Write clear and maintainable code using C++

## **Knowledge and capabilities:**

## Expertise in C++

* Expertise with Open GL, GLSL and Open Inventor
* Good understanding of Computer Graphics
* Good understanding of 3D math and coordinate systems
* Knowledge of compression techniques is added advantage
* Knowledge of GP/GPU programming is added advantage

## **Overall Behavioral capabilities:**

## Strong communication and data presentation skills

## Strong attention to detail

## Strong analytical and excellent problem-solving skills

* Flair for thinking out-of-the-box and innovative mindset
* Comfortable working in a fast paced, highly collaborative, dynamic work environment

**Location:** Bangalore

Feel free to connect for any query: Katyayani.mishra@siemens-healthineers.com