**Abstract**

1. **Background and Objectives:**

Medical images are images acquired from human or animal bodies and they are used for clinical diagnosis, treatment and patient management. The recent progresses in medical image analysis has given birth to image guided therapy, virtual reality and augmented reality, all these among other innovations have greatly improved health delivery, improved quality of life and also saved lives. However, the high cost of image acquisition, limited availability of medical image analysts and limited collaborative efforts between medical experts and scientists are major challenges of medical image analysis in developing world. The advances in internet and network technology has produced web technologies which make it possible to offer platform or software as a service via the web, making it possible for end users to access computer resources or specialized software tools remotely. Here we present a new web based e-infrastructure called Medical Image Processor and Repository (MIPAR).

1. **Methods**

MIPAR comprises of medical image repository and some specialized image analysis software packages. These analysis tools were deployed on Sci-Gaia’s High-Performance Computing (HPC) infrastructure. The web interface was designed using HTML, CSS and BootStrap. JavaScript and JQuery were used for client-side validation. Users send and receive data to and fro the server using HTTP response and a Client-Server Architecture. The deployed codes in the server side communicated with PHP using Representational State (REST) API in processing sent images. For worldwide coverage, each user page is protected using Shibboleth and authentication and authorization is done through Federated Identity.

1. **Results**
2. **Conclusion**

MIPAR allows users to donate, download and process medical images at no cost. It is our hope that such useful, rare and unique tool will encourage collaboration, improve diagnosis, improve patient management and has the potential to promote open science in Africa.