



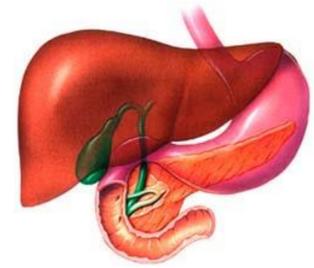
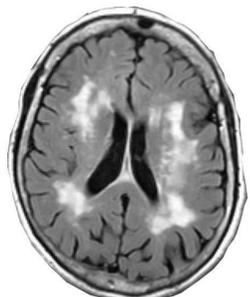
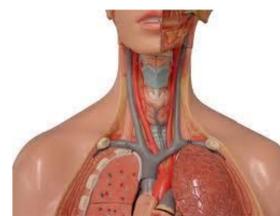
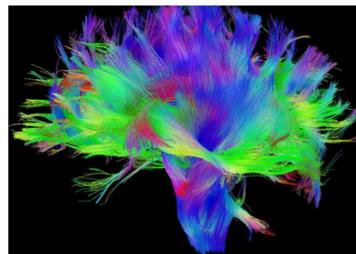
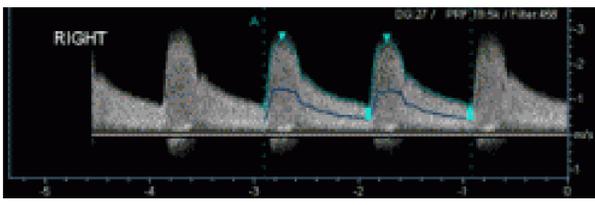
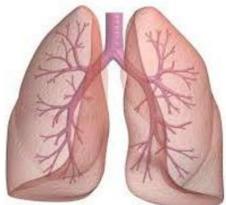
Medical Image Analyzer

Benjamin S. Aribisala^{1,2}, Rufus O. Akinyemi^{3,4}, Oluwatoyin A. Enikuomehin¹

¹Computer Science Department, Lagos State University, Nigeria; ²Brain Research Imaging Centre, University of Edinburgh, Edinburgh, UK; ³Institute for Advanced Medical Research and Training, College of Medicine, University of Ibadan, Nigeria; ⁴Institute of Neuroscience, Newcastle University, UK

Introduction

- ❖ Medical images are images acquired from humans or animals
- ❖ Medical images are used for clinical diagnosis, treatment and patient management.
- ❖ There are many methods of acquiring medical images. Each method has specific use, strengths or weaknesses
- ❖ Medical Image analysis and computer vision offer tools for visualizing medical images and for extracting meaningful information from them.



Problem Statement

- ❖ Some of the challenges in the field of medical image analysis
 - Imaging equipment are very expensive
 - Image acquisition is very expensive
 - There are limited availability of medical image analysts in Africa
 - Limited collaboration efforts and data sharing amongst clinical experts
- ❖ The advancements in internet technology, data communication and reduction in hardware cost have led to the birth of Science Gateway
- ❖ Science Gateway can help in solving medical image analysis problems by offering tools for
 - Creating image repository
 - Making image analysis tools available remotely
 - Making workflow available
- ❖ Science Gateway is in top gear in the developed world but very sluggish in Africa
- ❖ In particular, there is no platform for image analysis or image repository in Africa

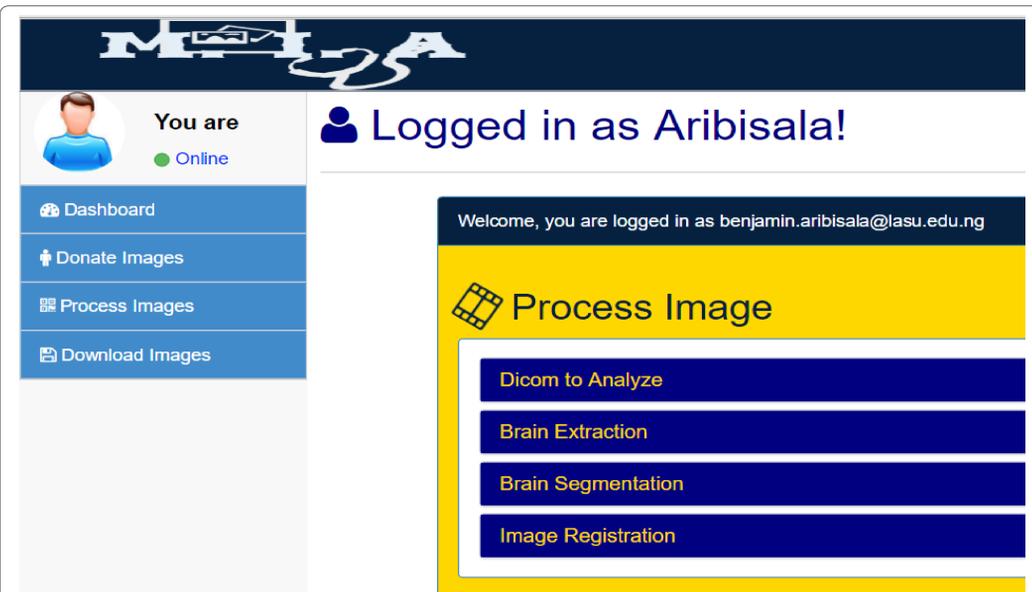
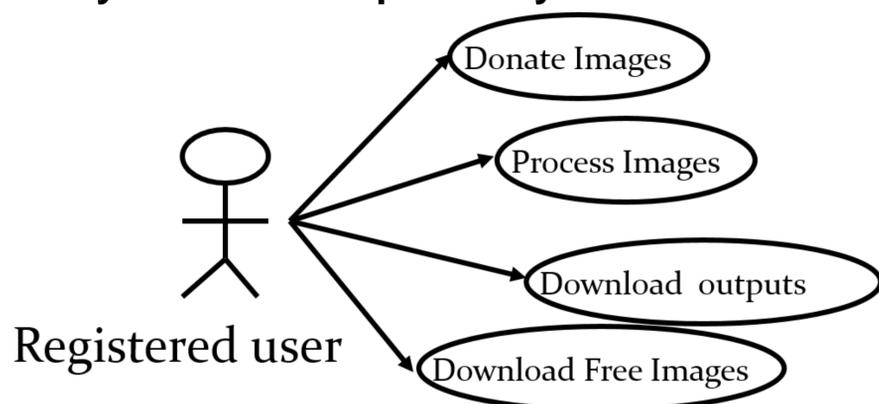
Aim

- ❖ The aim of this project is to develop an e-infrastructure which will contain
 - An image repository of medical images acquired in Africa and other continents.
 - A platform for processing medical images

Benefits

- ❖ It is our hope that such a useful, rear and unique tool could lead to
 - Improved and timely diagnosis
 - Improved patient management
 - Increased life expectancy
 - Encourage collaboration
 - Safes cost of travelling to see other experts

Analysis of the Proposed System



Software Development: The development of Medical Image Analyzer (MIA) started at the summer Hackfest organized by **sci-gaia** in Catania Italy in July 2016. The backend of MIA was developed at the Hackfest. The interface was later developed using php and MySQL. We are at a pilot stage and implementation was done using only brain images. The full implementation will allow the storage of other anatomies. **Eko-Konnect** will give us the support for hosting the tool to make it available to users. Funding will be sort from other funding bodies to enable full implementation.

Conclusions: The web based medical image analyzer will be useful to clinicians and researchers interested in getting specific information from medical images. Post graduate students will also have access to the tool and use it in their research work, either as guides or as a tool for analyzing their images. The community will benefit greatly from the tool because diagnosis could be faster and more accurate, and also patient management will be improved because experts would have a common platform to share expertise, case reports and experience. Medical experts and researchers at remote areas would not need to travel before having access to other experts, this could also lead to timely and improved diagnosis.

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