Product Engineering and QA Services for BioImaging System

Our vision is to inspire new possibilities for the health ecosystem with technology and human ingenuity. At CitiusTech, we constantly strive to solve the industry's greatest challenges with technology, creativity, and agility. Together with the world's leading Healthcare and Lifesciences organizations and our partners, we aim to accelerate the transition to a human-first, sustainable, and digital healthcare ecosystem.
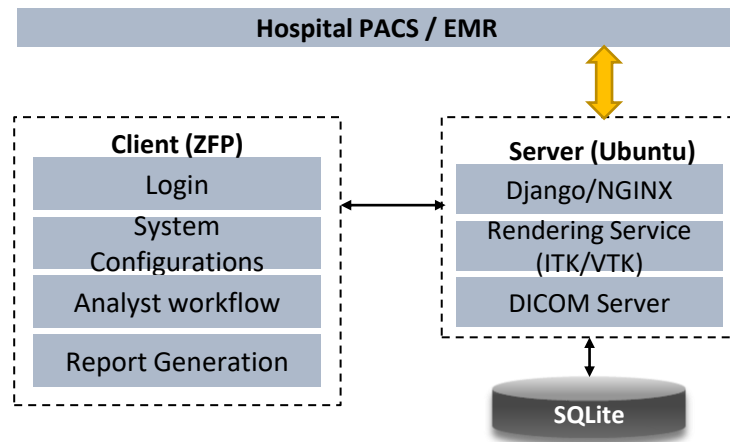
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Client Requirements

- Client is a leading provider of software solutions for vascular diseases and wanted to build an accurate clinical solution based on ground-truth histology and machine learning

- The existing software product is non-invasive Computed Tomography Angiogrpahy (CTA) analysis to provide unprecedented specificity of plaque stability and vessel structure, based on histology

- Client's requirement is to support high quality manual and automation testing of the application by CitiusTech QA team and build DICOM interface in their current product

- CitiusTech was selected for this engagement given its expertise in product engineering & medical imaging expertise

Solution Schematic

Hospital PACS / EMR

Client (ZFP)
- Login
- System Configurations
- Analyst workflow
- Report Generation

Server (Ubuntu)
- Django/NGINX
- Rendering Service (ITK/VTK)
- DICOM Server

SQLite

CitiusTech Solution

- Development of DICOM interface for external DICOM entities like clinics/modalities to send/retrieve patient studies

- Development of rendering Aorta Surface in viewer

- Performed Quality assurance for some of the key features including:
  - Different clinical and treatment workflows within viewer for physicians and analysts/radiologists
  - Segmentation tool with features like Zoom, pan, measure, scroll , on screen caliper tool, paint brush, image fill, cull and evaluation of Lumen and Wall
  - Double oblique multiplanar reconstruction

- Automation testing of the Web UI and DICOM clinical workflows

- Built technical design documents of modules developed by CitiusTech

Value Delivered:

- Leveraged CitiusTech's expertise in DICOM and clinical expertise for accelerated development

- CitiusTech team had been instrumental in finding and help fixing optimization issues to customer in viewer like reducing patient load time, improving response time when multiple analysts use the system and enabled concurrent DICOM receive support from remote facilities