Gustavo Marques

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**Summary**

I am a biomedical engineer with over 15 years of experience in systems integration, specializing in Healthcare IT, R&D, and strategic consultancy for healthcare. I have extensive expertise working in NHS environments, including migrations, interface design, and troubleshooting complex healthcare systems.

My technical skills include full-stack development with InterSystems Cache/IRIS, HL7, FHIR, DICOM, and DICOMweb protocols. I am proficient in Azure DevOps pipelines, VSCode, Git, and Python, with a particular focus on developing UI test improvements and automation.

Throughout my career, I have successfully led and delivered integration projects for hospitals and healthcare providers across Latin America and Europe, with strong experience in radiology and ultrasonography workflows (PACS, HIS, RIS, EMR, EPR, EHR) and major EHR systems (Epic, Cerner).

As a SCRUM Product Owner, I excel in project management, backlog definition, and sprint prioritization. I am recognized for my ability to work independently, solve complex problems with precision, and maintain exceptional attention to detail.

I bring deep expertise in the Rhapsody Integration Engine, recognized as a leading solution for healthcare interoperability. I have used Rhapsody extensively to enable seamless EHR integrations and FHIR-based data exchange, ensuring secure, scalable, and standards-compliant communication across complex healthcare systems. Its flexibility, reliability, and powerful transformation capabilities have allowed me to deliver robust solutions that improve patient care, support clinical decision-making, and accelerate digital health transformation.

My broader development experience spans LabVIEW, Autodesk Inventor, Simpleware, C, C++, Java, JavaScript, PHP, HTML, and SQL. I am passionate about building reliable solutions that improve clinical workflows, enhance healthcare delivery, and drive innovation in healthcare IT.

**Experience**

**Migration and Integration Specialist**

Mizaic

May 2025 - Present (4 month)

* Delivered and supported hybrid cloud deployments in **Azure** with **Kubernetes**, enabling scalable ingestion of medical images into MediViewer and ensuring performance across large NHS datasets.
* Automated migration workflows, ingestion processes, and monitoring tasks using **Python** and **Bash**, strengthening system reliability, traceability, and compliance.
* Built and optimized **CI/CD pipelines** in Azure DevOps to streamline deployments of microservices and infrastructure for EDMS environments.
* Integrated healthcare systems (**HL7, FHIR, DICOM, DICOMweb**) to connect MediViewer with PACS, RIS, HIS, and EPR platforms across NHS Trusts.
* Provided **customer-facing technical support**, troubleshooting incidents with clinical and IT teams to maintain high service availability in production environments.
* Supported **audits, change control, and supplier management** activities to uphold product safety, regulatory compliance, and ISO quality standards.
* Partnered with internal engineering teams and external suppliers to validate infrastructure, test new releases, and manage version upgrades.

**DCS Interface & Integration Analyst**

Mid Cheshire Hospitals NHS Foundation Trust

Mar 2024 – Mar 2025 (1 year)

* Spearheading the migration from PCS Silverlink to Meditech Expanse by architecting and implementing bespoke integration interfaces.
* Designing custom solutions that ensure seamless data flow and communication between legacy systems and the new Meditech platform.
* Collaborating with clinical and IT teams to map existing workflows and transition processes, ensuring minimal disruption and enhanced operational efficiency.
* Leveraging expertise in healthcare interoperability standards to optimize system performance and maintain data integrity throughout the migration process.
* Conducting comprehensive system diagnostics and performance tuning to support a smooth and reliable integration experience.

**Cloverleaf Specialist** 

Alliance Healthcare

Jan 2024 - Mar 2024 (3 months)

* Worked to help the migration from Cloverleaf to SAP in the Excalibur project. Solved issues with the Cloverleaf Alert system and with the stability of Cloverleaf during Vmotion in VMware.

**System Integrator Engineer** 

GE HealthCare

Jun 2022 - Nov 2023 (1 year 6 months)

* Worked with Healthcare IT, integrating GE IT Products (HIS, RIS, LIS, PACS), managing and developing projects to deliver and support integrated solutions for hospitals and healthcare providers in the UK. Cloverleaf, Mirth, Rhapsody, Iguana. HL7 FHIR and DICOM Protocols. Epic and Cerner EHRs. Java and Tcl development.

**Integration Consultant** 

ReStart - Interoperable Digital Care

Jan 2022 - Dec 2022 (1 year)

* Implementation, troubleshooting, user support, training and development with several Integration Engines like Mirth, HealthShare and Rhapsody.
* Managing and troubleshooting interfaces between existing systems
* Working experience of HL7 and FHIR
* Helping GP practices and other community based health providers with healthcare messaging Managing Integration Engines
* Extensive experience managing data

Skills: System Diagnostics · System Performance · Integration · Extract, Transform, Load (ETL) · MongoDB · Open Database Connectivity (ODBC) · System Security · Databases · System Administration · Microsoft SQL Server · JSON · REST APIs · Object-Oriented Programming (OOP) Software Development · Intersystems Cache · SQL · JavaScript · Cache Object Script

**Consulting Specialist**

Interconnect Technology

Jan 2016 - Dec 2021 (6 years)

* Delivered world-class integration solutions using InterSystems Cache/IRIS, including software development and database administration with Python, VB6, and Azure DevOps pipelines.
* Provided expertise in VSCode and Git for IRIS projects,
* Developed and maintained Azure pipelines to integrate VB6 executables into deployment workflows, extending to automated deployments.
* Evaluated InterSystems IRIS releases and notifications, ensuring compatibility and performance for PAS/HIS/EPR systems (Epic, Cerner).
* Ensured data integrity, consistency, and security using HL7, DICOM, FHIR, and DICOMweb standards, with proficiency in REST APIs, JSON, and MongoDB.

**System Integration Specialist**GE HealthCare

Feb 2010 - Dec 2015 · 5 yrs 11 mos

* Integrated GE Healthcare IT products (HIS, RIS, LIS, PACS) for hospitals and providers in Latin America, managing projects to deliver solutions using Cloverleaf, Mirth, Rhapsody, and Iguana.
* Leveraged HL7, FHIR, and DICOM protocols, alongside Epic and Cerner EHRs, with development in Java and Tcl.
* Incorporated Azure DevOps to streamline workflows and enhance project efficiency.
* Served as SCRUM Product Owner, defining and prioritizing sprints and integration backlogs.

**Field Engineer Ultrasound -IT** 

GE HealthCare

Jan 2008 - Jan 2010 (2 years 1 month)

* Responsible for developing and maintaining strong interpersonal relationships with customer representatives, ensuring Customer Satisfaction and maintaining all equipment models specific to a modality.
* I worked as an ultrasound engineer with strong IT skills maintaining and supporting IT Healthcare interventions and installations.

**Physicist** 

Brazilian Center for Research in Energy and Materials (CNPEM)

Jan 2006 - Jul 2007 (1 year 7 months)

R&D at CNPEM:

* Scientific Instrumentation and Automation
* Solutions development using LabVIEW/National Instruments
* National Instruments Hardware implementation to data aquisition and control in the beamline and in the main storage ring.
* Vibration Analysis to meet electronic microscopes(SEM/TEM) given requirements

**Education**

**Universidade Estadual de Campinas**

Doctor of Philosophy (Ph.D.), Biomedical/Medical Engineering

2012 - 2016 - (All required credits completed – Thesis defense pending)

Experience in Biomedical Engineering, focused on Biomedical Instrumentation. Main fields: Biomedical Images, Physiological Stimulation by Ultrasound, Biological Tissue Stimulation by mechanical waves (Ultrasound) and electromagnetic waves (LASER), Biomedical signal analysis by ECG, EEG, Evoked Potencials and MRI/fMRI Images. Medical Image Segmentation experience using Simpleware - converting 3D image data (such as MRI and CT) into models for Computer-aided Design (CAD), Computer-aided Engineering (CAE) and 3D Printing.

**Universidade Estadual de Campinas** 

Master, Physics

2004 - 2005

Experience in optics, lasers, signal conditioning, optical tweezers, nanopositioning, low signal to noise ratio measurements

**Universidade Estadual de Campinas** 

Licentiate degree, Physics

1998 - 2003

**Universidade Estadual de Campinas** 

Bachelor's degree, Physics

1998 - 2002

**Skills**

Databases   •   Healthcare Information Technology   •   Medical Imaging   •   Biomedical Engineering   •   Project Management   •   Website Development   •   Web Services   •   Electrical Engineering   •   Electronics   •   Optics