

Toni Magni

BIOMEDICAL ENGINEER

Medical software interoperability with a focus on orthodontic practices. My goal is to help bring current state of the art software to the medical domain, by laying down the fundamental infrastructure for progress: making the implementation of medical software standards simple and easy.

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matrix:user/zgypa:matrix.org

<https://github.com/zgypa>

<https://www.linkedin.com/in/toni-magni-84437042/>

EXPERIENCE

Ortocomputer

Owner

Jan 2013 - Present

Orthodontic Practice Informatics Developer and Consultant

- Interoperability specialists
- Open-standards software solutions
- Maintenance of servers and workstations
- provide and quote telecommunication solutions for orthodontic practices
- network technician.

tops Software

European Process Engineer

Mar 2007 - May 2022

Devops, technical support, training and sales in Europe;

- Installation and implementation tasks
- Research and development of software and procedures to improve efficiency of internal implementation and support processes
- Sales

SecurityCam

Senior Developer

Apr 2003 - Feb 2004

JAVA web-based multi-platform remote management for security videos financed by the government agency "Funding Authority for Studies and Projects" and managed by the center for technological development of the university of Brasília in collaboration with the company "Aeronet Informática". (original: Sistema de Monitoramento Remoto por Images financiado pelo FINEP e coordenado pelo CDT-UNB e, pelo interveniente Aeronet Informática.)

- Led and supervised a team of three developers.
- Designed the software architecture and database schema.

Neurological Surgery Department, University Hospitals Health Systems

Operating Room Technician

Jan 1999 - Jan 2001

Oversaw the operation and maintenance of a UNIX-based stereotactic surgical navigation system in neurosurgery operating rooms.

- Hands-on experience with patient care, including the placement of fiducial markers on patients' heads before surgical procedures.
- Strong background in the unique and specialized setting of neurosurgery operating rooms.
- Worked on call demonstrating the ability to respond promptly to emergent situations and make critical decisions to ensure patient care.

Department of Orthodontics, Case Western Reserve University

System Administrator

Oct 1996 - Sep 1998

- Administered UNIX Silicon Graphics Workstations with IRIX.
- Set up and Administered department web site on Linux.
- Contributed to the design, development, and testing of a high-resolution, cost-effective 3D surface imaging equipment.

SKILLS

SYSTEM ADMINISTRATION AND DEVOPS

ipv4, ipv6, docker, linux routing,bsd routing, zfs, truenas, openwrt, proxmox, hyper-v, vmware, virtualbox, kvm, tor, freepbx, asterisk, voip

CYBER SECURITY openvpn, pki, ssh, wireguard,

PROJECT MANAGEMENT agile workflow, jira, confluence, mediawiki, dolibarr

PROGRAMMING python, java, posix shell, github, gitlab, git flow

MACHINE LEARNING pytorch

WEB DEVELOPMENT html, css, javascript

CLINICAL INFORMATICS enterprise imaging, orthanc, dicom, hl7, ihe, snomed, iso, ansi

CERTIFICATES

IHE Certified Professional

IHE Foundations <https://ihe.net>

- Present

Introduction to Marketing

Coursera <https://www.coursera.org/account/accomplishments/certificate/2EA8G77N6PWK>

- Present

Understand Your Cybersecurity Threats

HIMSS

- Present

Cryptography

Coursera <https://www.coursera.org/account/accomplishments/certificate/3CDXHRNKW8MG>

- Present

Software Security

Coursera <https://www.coursera.org/account/accomplishments/certificate/A62QXP2H7K>

- Present

Usable Security

Coursera <https://www.coursera.org/account/accomplishments/certificate/FJLPBGNEKK>

- Present

Indoor Skydiving

iFly Indoor Skydiving <https://www.iflyworld.com/>

- Present

VOLUNTEERING

Department of Orthodontics, Case Western Reserve University

Clinical Instructor

Clinical informatics instructor and researcher.

Dec 2021 - Present

- Responsible for DICOM-ization of Bolton Brush Legacy Collection

American Dental Association Standards Committee

Working Group Chair

Working Group Chair

Feb 2005 - Present

- Awarded 'Volunteer of the Month'

Bolton Brush Growth Study Center, Case Western Reserve University

Research Associate

Development of orthodontic and cephalometric informatics standard, software consulting.

Aug 2006 - Aug 2010

Vascular Research Center MetroHealth Campus, Case Western Reserve University

Biomedical Engineer

Implementation in MATLAB of algorithm to measure T-wave alternans from intracardiac potentials.

Sep 2000 - May 2001

PROJECTS

open-ortho

Jan 2019 - Present

Roles

- Team Lead
- Software Developer

volunteer

ovena

Jan 2019 - Present

Roles

- Main Developer

volunteer

dicom4ortho

Apr 2020 - Present

Roles

- Main Developer

volunteer

Sulla Strada Maestra

Jan 2018 - Jun 2018

Roles

- Actor, played the part of Tichon, the bartender.

performance

Actor Nando

Oct 2014 - Mar 2015

Highlights

- Recorded several videos with Screenfabula.

volunteer

Dabbacchio

Jan 2013 - Jan 2014

Calomito

Jan 2005 - Jan 2011

Highlights

- 2011: Recorded CD "Cane Di Schiena". See <https://calomito.bandcamp.com/album/cane-di-schiena>.

Roles

- Trombone Player

EDUCATION

Universidade de Brasília

Jan 2003 - Aug 2006

Masters of Science Electrical Engineering, Computer Networking

Case Western Reserve University

Aug 1996 - May 2001

Bachelor of Science Biomedical Engineering

Deutsche Schule Genua

Sep 1982 - Jun 1996

German Abitur, Maturità Italiana

AWARDS

Standards Committee on Dental Informatics (SCDI) Volunteer Award

Jan 2010

American Dental Association

The Standards Committee on Dental Informatics (SCDI) Volunteer Award is intended to recognize the “unsung heroes” who participate in the development of dental product standards and technical reports. The SCDI Volunteer Award will honor annually an individual (not currently serving in an officer position, i.e. SCDI Chair/Vice Chair, Subcommittee Chair/Vice Chair) who has made significant contributions to the dental product standards program through exceptional donations of time and expertise.

PUBLICATIONS

ANSI/ADA 1100-2022

ANSI (American National Standards Institute)

Jan 2021

Codes for Orthodontic/Craniofacial/Forensic Photographic Views and View Sets. High quality photographic documentation is central to optimizing orthodontic, craniofacial, and forensic clinical records. This white paper shows how codes, enumerated terms, systematized nomenclature, templates and informatics standards can be used to improve the interoperability and transmissibility of visible light intraoral and extraoral clinical photographs.

ADA TR 1065-2019

ANSI (American National Standards Institute)

Jan 2019

Use Cases of the Orthodontic Electronic Health Record. The purpose of this technical report is to create an approved list of common use-cases that define the utilization of the electronic health record within the scope of orthodontics.

ADA Technical Report No. 1085 Guidelines for the Secure Transmission of Protected Health

ANSI (American National Standards Institute)

Jan 2015

This report provides a technical specification based on the Direct Secure Messaging Protocol for the secure electronic transmission of all protected health information (PHI) in dentistry.

ADA TR 1048-2011

ANSI (American National Standards Institute)

Jan 2011

ADA Technical Report No. 1048 for Attachment of DICOM Dataset Using E-Mail. This report promotes patient care and oral health through the application of information technology to dentistry's clinical and administrative operations; to develop standards, Standards and technical reports. (2011, R2015)

ADA Technical Report No. 1060

ANSI (American National Standards Institute)

Jan 2011

The Secure Exchange and Utilization of Digital Images in Dentistry. This report promotes patient care and oral health through the application of information technology to dentistry's clinical and administrative operations; to develop standards, Standards and technical reports. (2011, R2015)

ANSI/ADA 1058-2010 (R2020)

ANSI (American National Standards Institute)

Jan 2010

Forensic Dental Data Set. This report promotes patient care and oral health through the application of information technology to dentistry's clinical and administrative operations; to develop standards, Standards and technical reports.

ADA TR 1059-2010 (R2023)

ANSI (American National Standards Institute)

Jan 2010

ADA Technical Report No.1059 Guidelines for the Application of the DICOM Standard to Radiographic - ADA1059-2020. In the current DICOM documentation, cephalograms are not addressed directly. This technical report (TR) was developed to fill the gap in such a way as to provide imaging equipment vendors an approved way of storing cephalograms along with their clinically relevant data, in an interoperable way.

Cone beam computed tomography and the orthodontic office of the future

seminars in orthodontics

Mar 2009

the use of technological devices has not always successfully increased the efficiency of orthodontic practices. often, new technology is introduced into the practice too soon, effectively interrupting the learning process of their older counterparts and hindering optimization. consequently, the ultimate goal of efficiency can easily become eclipsed by indulging into new orthodontic gadgets. cone beam computed tomography can similarly get in the way, if the users are not aware of such phenomena. in this article the author relates how these can negatively affect efficiency, while explaining the role of software interoperability for the ergonomics of the orthodontic practice. some suggestions on how to prepare for the future are provided.

Solving incompatibilities between electronic records for orthodontic patients

Am J Orthod Dentofacial Orthop

Jul 2007

Today, orthodontists should not need to burden their work load with tasks such as figuring out how to send patient information to colleagues or how to share the same patient record across different software programs. In a long-term attempt to lighten these tasks, we are developing a standard for electronic orthodontic patient records to enable a seamless interchange of data between software programs. This article describes a practical proposal that integrates 2 existing standards, HL7 and DICOM, to create a standard for electronic orthodontic patient records.

Proposta e implementação de um padrão para softwares ortodônticos

Universidade de Brasília

Jan 2006

46 f., il. Dissertação (Mestrado em Engenharia Elétrica)-Universidade de Brasília, Brasília, 2006. (Masters Thesis)

PANIO: The first orthodontic standard

American Association of Orthodontics Annual Session

Jan 2005

Poster.

LANGUAGES

ITALIAN: *native speaker*

ENGLISH: *native speaker*

GERMAN: *advanced*

PORTUGUESE (BRAZIL): *intermediate*

INTERESTS

ACTING:

MUSIC: *trombone, percussions*

REFERENCES

I've had the opportunity to test his professional and interpersonal skills on many occasions. Engineer Magni is an honest, trustworthy, and highly skilled professional. The project to promote computer interoperability in as many sectors as possible is the right one. In the field of medicine and orthodontics, orthodontic computer interoperability is an urgent necessity, based on principles of professional ethics and transparency towards patients.

— dr. Marco Rosa

Engineer Antonio Magni has been collaborating with our orthodontic practice as an IT expert for more than ten years now. He has always ensured the smooth functioning of our management software and the entire network infrastructure with great dedication and availability. Over these years, a relationship of friendship and mutual trust has developed between him and the members of the practice. This allows me to affirm that Antonio, or Toni as we call him, is a highly skilled IT professional and a friendly, reliable, punctual, and honest person. I can only wish him the best for the continuation of his professional career, hoping, although I have no doubts, that he will continue to come to our rescue with IT challenges in the future! Thank you, Toni, from all of us!

— dr. Andrea Compri

Toni has been very active in committing his time to improving standards and guidelines for digital dentistry over several years... with special emphasis on orthodontics. He has been totally dependable and has followed through on all tasks assigned to him.

— dr. Allan G. Farman

I first met Toni and worked with him on the Standards Committee on Dental Informatics for the ADA and AAO. His contributions are significant and his dedication to detail of this important area.

— dr. Bill Harrell