

Aldo Di Costanzo Mata

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Birthday: September 18th, 1987. (28 years old)



OBJECTIVE

Support the development and research of Medical Sciences and Technologies of the Healthcare system in order to increase the quality of life, reduce the costs generated by patient care and reach social groups not properly taken care of because of social, geographical or economical conditions. In particular, and for the future, I am interested in those Medical Sciences and Technologies that could be important for the Mexican Healthcare system.

INTEREST

Scientific research and development of **non-invasive diagnostic and monitoring methods** using light and tissue interactions in order to apply preventive or urgent Medical treatment and promote patient quality of life.

EDUCATION

Currently pursuing **Masters Degree on Industrial Physics Engineering** at Universidad Autónoma de Nuevo León in México.

- **Research Internship at the University of Rochester on Functional Near Infrared Spectroscopy (fNIRS).**

(Total average score: 97 out of 100)

Bachelor degree in Biomedical Engineering at Monterrey Institute of Technology and Higher Education in México. (Year 2012) With special focus on Internet-Networking, Electronics, Biomedical Instrumentation, Signal Processing, Analog Filter Design, Control Theory and Image Processing.

PERSONAL DESCRIPTION

My practical interaction with the Mexican Private and Social Security Healthcare environments has been quite fulfilling and has provided me with me with a hand on experience with medical equipment design, management & maintenance, healthcare procedures, labor relationships and decision making. Those interactions have given me a completely different scope of the nature of my work and a sense of shared responsibility and commitment making me a hard working person, with high sense of urgency, very passionate on my projects, punctual, innovative, proactive and polite.

ENTREPRENEURSHIP

2013-2015

Owner, Founder and Manager of "Tortonápoli", Ristoriante-Bistró.

Responsible for Business management, concept development, business-customer business- provider relationships, decision-making, leadership and anything regarding the business growth.

WORKING EXPERIENCE

2013

Service Engineer at "Tesi de México", Private Healthcare Technology provider.

Responsible for corrective and preventive maintenance of National Social Security Radiology Databases (Oracle) and Local School-Hospital Pathology Databases (SQL). This gave me the opportunity to experience and report the Pathology lab activity and study the database relationships regarding the process.

2012

Internship as a Clinical Engineer at "Unidad Médica de Alta Especialidad No.23 IMSS" Social Security Hospital with specialty in Gynecology and Obstetrics.

Responsible for corrective and preventive maintenance of the medical equipment. This provided me experience with Social Security Mexican Hospitals protocols and security procedures; Medical devices repairs and diagnosis, Patient-Healthcare professional interactions and union-government relationships.

2011

Internship as Clinical Engineer at "Hospital CIMA Monterrey" Private Healthcare Hospital.

Responsible for preventive maintenance of the medical equipment and documentation of the DICOM Local Area Network. This provided me specific knowledge with the Hospital Networking system, Radiology procedures and Medical Image Modalities Network Protocols.

2010-2011

Network Operation Control Center Specialist at Teleperformance Hispanic.

Monitoring and documentation of Local networks behavior, MPLS link status, local servers status, Cisco devices and AVAYA VoIP equipment. This granted me knowledge and tools in order to develop Wide & Local Area Networking Medical applications (Medical Equipment RFID Tracking System Hardware and Software).

2009-2010

Customer Account Executive at Teleperformance Hispanic (Comcast Chicago Outsource).

Manage customer billing accounts and troubleshoot digital cable issues remotely giving me experience with customer service and developed my English communication skills.

COURSES

- a) Latin America Optics & Photonics Workshops 2014, Cancún, Quintana Roo, México.
- Biosensing and Plasmonics (With Immunoglobulin functionalized surfaces)
 - Biosensing and Evanescent Fields on Fiber (With Immunoglobulin functionalized surfaces)
 - Fiber Optics (Photonic Fibers, Doped Fibers, SiO₂ Fibers)
 - Fiber Applications (Interferometers, Heat and Temperature sensing, Deformation sensing, Raman, Rayleigh and Brillouin Scattering, etc.)
- b) CCNA course by ATX Access Technology Experts, 2011, Monterrey, Nuevo León, México.
- Local Area Network design (DHCP Server, Subnet)
 - Routing, Switching (Static and dynamic routes, spanning tree)
 - VLANs, Access List, Frame Relay. (Basic Network Routing Security)
- c) Basic VoIP AVAYA course by ATX Access Technology Experts, 2011, Monterrey, Nuevo León, México.
- Understanding Avaya VoIP Tech Structure
 - IVR Design (Session design, codes and user privileges)

LANGUAGES

Fluent in Spanish and English (TOEFL IBT Score 102, Year 2015)

OTHERS

Societies and Fellowships

- OSA UANL Student Chapter President. Board 2015-2016
- National CONACyT Scholarship CVU/Becario: 627802/332756.

Research Projects

- “Optimized methodology for acquisition of functional near-infrared spectroscopy data from alert, upright infants” at the University of Rochester. Manuscript Submission NPh 15065SS.

Informatics Skills

- Matlab programming, Object-oriented programming on C#
- Assembly programming (For micro controllers)
- Arduino Processing Programming (Medical and electronic device design)
- Cisco IOS (Networking Operation Systems for Cisco devices)
- MySQL programming (Open Source Databases)
- Analog and Digital electronics applied to medical instrumentation
- Image processing (Using C# and Visualization Tool Kit Framework)
- RFID Applications Development. (Hardware, Software, Network and Front-End design)

Academic Projects

- AFM Sample temperature control on an aqueous medium using Control Theory on a Peltier plate. (Implementation stages)
- Medical Equipment RFID Tracking System Hardware and Software.
- 3D CT Modeling Software using VTK on C#.
- Solar positioner/tracker. (Following the Sun even on cloudy days)
- Noninvasive heart-rate monitor Hardware and Software (Using IR, Analog Filtering and Arduino)
- Analog Electrooculogram.
- Analog Electrocardiograph.

REFERENCES

The Institute of Optics, the University of Rochester

Prof. Andrew J. Berger

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