Alejandro **Sedano**

# **Automation** & **Robotics** Engineer

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## Profile

A Robotics Engineer with experience in both technical and project management fields. I have worked for recognized Robotics Research Institutes and lead technical projects in the food and medical sectors. I have global awareness by having lived and worked in 4 different countries and a joint European Master Degree in Automation, Robotics and Applied Informatics. I'm passionate about technology and a web developer in my free time.

I’m looking for full time jobs in the Robotics & Medical Devices industry or technology-based startups.

## Education

**M.Sc. Automation and Robotics**

Warsaw University of Technology, Poland

Graduated with honors – 2013

**M.Sc. Robotics and Applied Informatics**

Ecole Central de Nantes, France

Graduated – 2012

**Mechatronics Engineering, B.Sc.**

Universidad Panamericana, Mexico

Graduated with honors – 2010

## Experience

**Project Engineer, Mars, Inc., July 2014-Present, Poland**

* Working on technically complex projects that involve breakthrough technology and leadership skills.
* Responsible of designing automation solutions, preparing functional & technical specifications, quotations, and installation of industrial equipment.
* Implemented a sustainability project that achieved savings of steam equivalent to 250k€ per year
* Successfully delivered a new 20kton/year pet-food automated production process line.

**Robotics Research Assistant, Fraunhofer IPA, March 2013 – December 2013, Germany**

* Mechanical design, modeling, construction, and testing of mechanical systems for automated modular robots. Working in an international research environment with the latest robotic technology.
* Created a novel robotic structure based on state of the art technologies for rapid prototyping together with FEA optimization based on biological engineering principles.

**Validation and Development Engineer, TDI-SA., September 2009 – August 2011, Mexico**

* Design, testing, validation and development of orthopedic medical devices under strict medical regulations such as ISO 13485 and FDA.
* Create and maintain documentation related to manufacturing process such as functional specifications, manufacturing drawings and quality checklists compliant to CE regulations.
* Creation of fixtures and mechanical systems in compliance with ASTM norms to perform the testing and validation of 20 families of orthopedic products.

## Languages

**Spanish** • Native

**English** • Full Professional Proficiency

**Polish** • Working Proficiency

**German** • Limited Proficiency

## Skills

JavaScript/HTML/CSS

Python & VBA Programming

Presentation Skills

3D CAD Design & Simulation

Project Management / ERP

Product Development

## Projects

**Myorobotics (Make your own robotics)**

The EU project Myorobotics has the objective of creating a toolkit of 3D printed parts for the creation of modular, affordable, robotic systems.

* Developed and produced modular prototype structures based on optimal biological principles.
* Worked with state of the art additive manufacturing equipment. SLS, FDM & SLA.

**Robot Programming Editor (VAL Parser)**

Design and implementation of the front- and back-end of a VAL robot programming parser using the spiral model. The software is open source (GitHub) and currently used in robotic labs.

* Created of a Lexer and Parser for VAL robot programming language using ANTLR.
* Developed a GUI focused on usability and user experience in NetBeans.

**SENEKA (Roboter-Sensor-Netzwerk für Katastrophenmanagement)**

The SENEKA project idea aims to provide rescue teams with sensors and robots capable of aiding in the search and rescue of victims in disaster areas or dangerous situations.

* Responsible of developing and manufacturing an actuated base for a LiDAR system.

## Certificates

**Computer Science and Programming,** MITx

**Responsive Web Design**, Udacity

**Interactive 3D Graphics**, Udacity

**Project Management Essentials**, Mars University

**Topology Optimization and FE Analysis**, CATOPO

**TopSolid 7 CAD, CAM & PDM**, Cadtronica

## Hobbies & Interests

**Web development**, self-learning. I have published 3 websites. <sedano.me>, <viveroeljardin.mx> and <mysoft.net.pl>

**Internet of Things**, creating media centers and web servers with Raspberry Pi

**Video Games** and **Travelling**, two things I cannot live without.