

# Luis Andrés Valido Fajardo

Curriculum Vitae

	Education
2008-2013	Computer Science Engineering, University of Computer Science, Havana
2014	Introduction to the development of the ALBA Comprehensive Supervision and Control System, <i>University of Informatics Sciences</i> , Havana
2014	Introduction to the LaTex text composition system, <i>University of Informatics Sciences</i> , Havana
2014	Science Technology and Society, University of Informatics Sciences, Havana
2014	Creative group work techniques, <i>University of Informatics Sciences</i> , Havana International Summer School
2015	<b>General Improvement Course for professionals in training</b> , <i>University of Informatics Sciences</i> , Havana
2016-2019	Master in Computer Aided Engineering, University of Matanzas , Matanzas
	Education Online
2020	<b>Course Html</b> , <i>Sololearn platform</i> , Certificate 1014-20521103 https://www.sololearn.com/Certificate/1014-20521103/pdf/
2020	<b>Course C</b> , <i>Sololearn platform</i> , Certificate 1089-20521103 https://www.sololearn.com/Certificate/1089-20521103/pdf/
2020	<b>Course CSS</b> , <i>Sololearn platform</i> , Certificate 1023-20521103 https://www.sololearn.com/Certificate/1023-20521103/pdf/
2020	<b>Course C++</b> , <i>Sololearn platform</i> , Certificate 1051-20521103 https://www.sololearn.com/Certificate/1051-20521103/pdf/
2020	<b>Course SQL</b> , <i>Sololearn platform</i> , Certificate 1060-20521103 https://www.sololearn.com/Certificate/1060-20521103/pdf/
2020	Course Java, Sololearn platform, Certificate 1068-20521103 https://www.sololearn.com/Certificate/1068-20521103/pdf/

Course Ruby, Sololearn platform, Certificate 1081-20521103 https://www.sololearn.com/Certificate/1081-20521103/pdf/
 Course PHP, Sololearn platform, Certificate 1059-20521103 https://www.sololearn.com/Certificate/1059-20521103/pdf/

- **Course JQuery**, *Sololearn platform*, Certificate 1082-20521103 https://www.sololearn.com/Certificate/1082-20521103/pdf/
- **Course JavaScript**, *Sololearn platform*, Certificate 1024-20521103 https://www.sololearn.com/Certificate/1024-20521103/pdf/
- **Course C#**, *Sololearn platform*, Certificate 1080-20521103 https://www.sololearn.com/Certificate/1080-20521103/pdf/
- **Course Swift 4**, *Sololearn platform*, Certificate 1075-20521103 https://www.sololearn.com/Certificate/1075-20521103/pdf/
- **Course Python 3**, *Sololearn platform*, Certificate 1073-20521103 https://www.sololearn.com/Certificate/1073-20521103/pdf/
- **Course React + Redux**, *Sololearn platform*, Certificate 1097-20521103 https://www.sololearn.com/Certificate/1097-20521103/pdf/
- **Course Angular + NestJS**, *Sololearn platform*, Certificate 1092-20521103 https://www.sololearn.com/Certificate/1092-20521103/pdf/
- **Course Data Science with Python**, *Sololearn platform*, Certificate 1093-20521103 https://www.sololearn.com/Certificate/1093-20521103/pdf/
- **Course Machine Learning**, *Sololearn platform*, Certificate 1094-20521103 https://www.sololearn.com/Certificate/1094-20521103/pdf/
- **Course Python for Beginners**, *Sololearn platform*, Certificate 1157-20521103 https://www.sololearn.com/Certificate/1157-20521103/pdf/
- **Curso Intermediate Python**, *Sololearn platform*, Certificate 1158-20521103 https://www.sololearn.com/Certificate/1158-20521103/pdf/
- **Course Python Data Structures**, *Sololearn platform*, Certificate 1159-20521103 https://www.sololearn.com/Certificate/1159-20521103/pdf/
- **Course Responsive Web Design**, *Sololearn platform*, Certificate 1159-20521103 https://www.sololearn.com/Certificate/1162-20521103/pdf/
- **Course Kotlin**, *Sololearn platform*, Certificate 1160-20521103 https://www.sololearn.com/Certificate/1160-20521103/pdf/
- 2021 Course Go, Sololearn platform, Certificate 1164-20521103 https://www.sololearn.com/certificates/course/en/20521103/1164/landscape/png
- **Course Python for Data Science**, *Sololearn platform*, Certificate 1161-20521103 https://www.sololearn.com/certificates/course/en/20521103/1161/landscape/png
- **Course Coding for Marketers**, *Sololearn platform*, Certificate 1165-20521103 https://www.sololearn.com/Certificate/1165-20521103/pdf/
- 2021 Course R, Sololearn platform, Certificate 1147-20521103 https://www.sololearn.com/certificates/course/en/20521103/1147/landscape/png
- 2021 The distance education model of Cuban higher education in the context of the University of Matanzas, University of Matanzas, Matanzas, Virtual postgraduate course, 1 credit <a href="http://evead.umcc.cu/course/view.php?id=105">http://evead.umcc.cu/course/view.php?id=105</a>

- 2021 **Course Python for Finance**, *Sololearn platform*, Certificate 1139-20521103 https://www.sololearn.com/Certificate/1139-20521103/pdf/
- 2021 **Course Game Development with JS**, Sololearn platform, Certificate 1140-20521103

https://www.sololearn.com/Certificate/1140-20521103/pdf/

- 2022 Course Web Development Fundamentals course, Sololearn platform, Certificate 1141-20521103 https://www.sololearn.com/Certificate/1141-20521103/pdf/
- 2023 **Course Introduction to Python**, *Sololearn platform*, Certificate CC-HDLKFIGF https://api2.sololearn.com/v2/certificates/CC-HDLKFIGF/image/png
- 2023 **Course Python Developer**, *Sololearn platform*, Certificate CC-GKCL73B9 https://api2.sololearn.com/v2/certificates/CC-GKCL73B9/image/png

#### **Thesis**

title Mechanism for incorporating SVG graphics into the SCADA GALBA HMI.

tutors Eng. Roberto Cardenas Isla, Eng. Ariel Guerra Garayta

description At the University of Informatics Sciences, Faculty 5 has several production centers among which is the Center for Industrial Informatics (CEDIN) where the Guardian of the ALBA (GALBA), which had the task of providing a solution to the development of a SCADA in conjunction with the PDVSA company. The Human Machine Interface or HMI (Human Machine Interface) is the module of the GALBA SCADA system that allows configuring, supervising and controlling industrial processes. The HMI provides a library of graphic components (CG) that make it possible to recreate as realistically as possible the processes that they occur in plants. These graphics can be simple geometric primitives or as complex as industrial components used in the industry that you want to monitor. The CGs consist of certain limitation due to its current product design and implementation that are defined by specialists and leaves open to developers its implementation mechanisms and design. The work was based on the development of a mechanism for incorporating SVG graphics into the HMI of SCADA GALBA with the purpose of solving the limitations present in the graphic components of the HMI. The development of the mechanism is supported by the agile XP methodology with the use of the Scalable Vector Graphics (SVG) standard and Qt framework.

## Master's Thesis

title ROFLEXIN/LC System Man-Machine Interface Viewer for Mobile Devices.

tutors Ph.D Ramón Quiza Sardiñas

description The Center for Studies on Advanced and Sustainable Manufacturing (CEFAS) of the University of Matanzas develops the ROFLEXIN/LC project: Robust, flexible and intelligent, low-cost system for monitoring systems and mechanical processes. This project is fundamentally aimed at small and medium-sized companies, where the use of the alternatives available in the world market is not financially feasible. The present investigation arises from the need of the personnel that uses the ROFLEXIN/LC, to visualize the information collected by said system in mobile devices and tablets. The fundamental objective is to develop a mobile application capable of visualizing the information of the ROFLEXIN/LC system in real time. For the development of the proposed solution, an analysis of the main tools, technologies and methodologies used in the construction of software is carried out. The process was guided by the use of the following tools and technologies: Visual Paradigm as a CASE tool, UML as a modeling language, JSON as a data exchange format, and Java as a programming language. Developed with the Eclipse IDE with the ADT extension. To validate that the results achieved were those expected, a set of tests was carried out. It was possible to correct all the detected non-conformities, which means that the proposed solution is ready to be deployed. Finally, a Viewer for mobile devices and tablets with Android operating system capable of representing in real time the information coming from the ROFLEXIN/LC system was obtained.

# Experience

- 2009–2015 Integral Supervision and Control System of Alba (SCADA GALBA), Developer, Havana, University of Computer Sciences, Industrial Computer Center Module Developer Man-Machine (HMI) belonging to the SCADA Galba project
- 2014–2016 Industrial Automated System based on GNU/LINUX (SCADA SAINUX),

  Developer, Havana, University of Computer Sciences, Industrial Computer Center

  Module developer Module-Machine (HMI) belonging to the SCADA SAINUX project
- 2016–2023 **Department of Resources for Learning**, *Developer*, Matanzas, University of Matanzas

Extensions developer to virtual learning environments of the University of Matanzas (Moodle), educational applications for devices with Android operating system. Administrator of virtual learning environments of the University of Matanzas. Installation and deployment of websites with the use of CMS and LMS

- 2016–2022 **Informachy Department**, *Associate Professor*, Matanzas, University of Matanzas Teaching category: Instructor
- 2021–2022 **Combiomed Digital Medical Technology**, *Developer*, Havana Module developer Module-Machine (HMI) of the Software for the Control and Monitoring of the Artificial Fan for COVID-19 patients.
- 2021–2024 **Pre -University Institute of Exact Sciences of Matanzas**, *Competitive programming coach*, Matanzas
- 2023–2024 **Network Department**, *Specialist B*, Matanzas, University of Matanzas Technical support of the Virtual Learning Environments of the University of Matanzas. Installation and deployment of websites using LMS Moodle
- 2023–2024 **INNOVAT**, *Developer*, Matanzas

  Design and implementation of the PSGAME+ application for Android mobile devices

2023–2024 **Merchise Autrement**, *Developer*, Business Solutions on Odoo, consulting and implementation

Implementation of functionalities. Corrections of non-conformities

## Teaching

- 2016–2016 **Python programming language**, *Informatics Engineering*, Matanzas, University of Matanzas
  5th year
- 2016–2022 **Computer architecture**, *Informatics Engineering*, Matanzas, University of Matanzas 2nd year
- 2017–2020 **Specific preparation for ICPC competitions**, *Informatics Engineering*, Matanzas, University of Matanzas 1st, 2nd and 3rd year
- 2019–2019 **Android course**, *Bachelor of Computer Education*, Matanzas, University of Matanzas

  3rd year
- 2019–2022 Introduction to programming, Informatics Engineering, Matanzas, University of Matanzas
  1st year
- 2020–2022 **Design and object -oriented programming**, *Informatics Engineering*, Matanzas, University of Matanzas

  1st year

# Thesis tutoring

- 2015 System for the Information Management of Technical Files at the Industrial Computer Center, Yadriel Cuesta Hechavarría, Informatic Science University, Havana
  - Diploma work to opt for the title of Computer Science Engineer
- 2015 Network State processor for SCADA-GALBA adjustments to the electricity sector, Carlos Manuel Castillo Chacón, Jose Manuel Acevedo Medina, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer
- 2016 Graphic components for the representation of pipe accessories in the SAINUX SCADA, Rosmery Pedraza Ceballo, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer
- 2016 Graphic components for the representation of valves and pumps in the SAINUX SCADA, Claudia María González Fernández, Informatic Science University, Havana
  - Diploma work to opt for the title of Computer Science Engineer
- 2016 Desktop customer for the display environment of the Men's Machine SAINUX SCADA, Alik Ramón del Risco del Risco, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer

- 2016 Graphic components for the representation of switches and selectors at the SAINUX SCADA, *Javier Bravo Calzado*, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer
- 2016 Development of storage graphic components at the SAINUX SCADA, Luis Orlando Cejas, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer
- 2016 Serialization mechanism for information managed in the editor SAINUX SCADA, Alvaro Denis Acosta Quesada, Informatic Science University, Havana Diploma work to opt for the title of Computer Science Engineer
- 2022 **Plugin to measure the quality indicators of Moodle courses**, *Hamsel Brea García*, University of Matanzas, Matanzas
  Diploma work to opt for the title of Computer Engineering
- 2022 Computer System for Human Resources Management and Services of the Artistic Creation Project Vigía, Ramsey Ricardo Busto Martínez, University of Matanzas, Matanzas Diploma work to opt for the title of Computer Engineering
- 2023 Antencional test system for the "Antonio Guiteras" thermoelectric, Ronald Guillén Sintes, University of Matanzas, Matanzas

  Diploma work to opt for the title of Computer Engineering
- 2023 Computer system for physical test management in the sports selection process in the province of Matanzas, Javier Alejandro González Muñiz, University of Matanzas, Matanzas Diploma work to opt for the title of Computer Engineering
- 2023 Computer system for the commercial value of the tourist offer of the destination city Matanzas, Randy Mederos Santana, University of Matanzas, Matanzas Diploma work to opt for the title of Computer Engineering
- 2023 **Notification plugin of request to create courses in the Moodle to the category managers**, *Ana Mónica Rodríguez García*, University of Matanzas, Matanzas Diploma work to opt for the title of Computer Engineering

# Thesis opponent

- 2017 Software for the management of internal client information in hotel systems from the endonarcoeting perspective, Fabianne Díaz Santiago, University of Matanzas, Matanzas

  Diploma work to opt for the title of Computer Engineering
- 2019 Computer Information System for the Directorate of the University of Matanzas, SID, Rasiel Valdespino Jiménez, University of Matanzas, Matanzas

Diploma work to opt for the title of Computer Engineering

## Idioms

Spanish Native

English Professional competence

# Tools and technologies

language

Programming C, C++, Java, JavaScript, Html5, CSS, PHP, SQL, Bash

Python

Implementation of scripts for scheduled tasks. Implementation of desktop applications to obtain and evaluate multiple linear regression models using different statistical processing and data science packages such as Matplotlib, Pandas, Numpy, Scipy and Statsmodels. Implementation of desktop applications for the management, control and status check of certain processes in Unix operating systems. Implementation of modules for the connection and consumption of API data from the applications. Implementation of solutions to competitive programming problems.

Operating Debian, Ubuntu, Window, Android systems

Frameworks Qt, Yii, Codelngiter, JQuery, AngularJS, W3CSS, Bootstrap

Django Implementation of web systems for the management of human resources, tourist resources, control and planning of activities, generation of payroll for human resources in Excel and PDF format. Implementation of APIs using django-rest-framework for the communication of other applications with a system developed in Django. Customizing the Django admin panel. Implementation of multilingual systems not only in the graphical user interface but also in the content stored in the database.

Content Joomla, WordPress management system

> Moodle Installation and deployment on servers with Ubuntu and Debian with Mariadb database manager. Personalization, configuration and adinstration of the platform. Administration, management and assembly of courses on the platform. Development of extensions of the report, themes and block types. Development of applications that consume the API that provides the platform. Examples of deployments performed: Eva Undergraduate, Eva Postgraduate, Eva MOOC (you can click on the names to view)

Database Postgres, MySql, MariaDB

manager

2D graphic Gimp, Inkscape

design

CASE Tool Visual Paradigm

Web server Apache, XAMPP, NGINX

Text LaTex

processor

Version Git

control

Software Extreme Programming (XP)

development methodology

> Antonio Maceo 54 – Código Postal 44430 Cidra, Unión de Reyes, Matanzas, Cuba 12 Marzo 1989

### **Publications**

- 2017 Mechanism for the automation of backup copies of the Virtual Learning Environment of the University of Matanzas, VIII International Scientific Convention of the University of Matanzas, V International Engineering Workshop, Matanzas Published in citc.umcc.cu with the ISBN code: 978-959-16-3296-8
- 2017 "Cesar and the numbers": computer resource to promote the learning of the sum operation, in the first grade, XIX International Event "Mathematics, Statistics and Computing", MATECOMPU 2017, Varadero Published in citc.umcc.cu with the ISBN code: 978-959-16-3671-3
- 2018 Support tool for the probability and statistics subject to graph probability distributions in the distance education study modality of the University of Matanzas, Opuntia Brava Magazine, Group I Cuban Classification, Las Tunas Published in the book Science and technological innovation vol II, in the chapter Distance learning. With ISBN for the complete work 978-959-7225-26-3, ISBN for the chapter 978-959-7225-34-8
- 2018 Development of the Bezier quadratic and cubic curve graphic components, Monographs, University of Matanzas, Matanzas Published in monografia.umcc.cu (http://monografias.umcc.cu/monos/2018/FCT/mo1871.pdf)
- 2018 Graphical user interface for interaction with SCADA SAINUX modules (VSERSAI), Monographs, University of Matanzas, Matanzas

  Published in monografia.umcc.cu (http://monografias.umcc.cu/monos/2018/FCT/mo1872.pdf)
- 2018 ROFLEXIN/LC system Man-Machine Interface viewer for Android mobile devices, *Monographs*, University of Matanzas, Matanzas

  Published in monografia.umcc.cu (http://monografias.umcc.cu/monos/2018/FCT/mo1876.pdf)
- 2019 Intelligent and low-cost monitoring architecture for mechanical system and processes, IX International Scientific Conference, Holguin University, Holguín ISBN:978-959-7237-34-1
- 2020 MiGimusic: APK to promote musical education in pioneering Rhythmic Gymnastics , International Congress online CUBAMTRICIDAD, University of Sciences of Physical Culture and Sport Manuel Fajardo, Havana ISBN:978-959-07-2395-7
- 2020 Technological innovation for musical education in Musical Rhythmic Gymnastics, 1st National ONLINE Innovation Workshop, National Institute of Sports Physical Education and Recreation, Havana ISBN:978-959-203-237-8
- The use of mobile devices in Cuban university teaching, *Academia.edu*, https://www.academia.edu/47857643/EL\_USO\_DE\_DISPOSITIVOS\_MOVILES
- 2021 **The use of mobile devices. An innovative experience in professional training**, Book *The science of the University of Matanzas in the confrontation with COVID-19*, Editorial UM

Events

- **Pascal Cup**, *University of Computer Sciences*, Havana Contestant
- **Pascal Cup**, *University of Computer Sciences*, Havana Contestant
- **Pascal Cup**, *University of Computer Sciences*, Havana Contestant
- **Pascal Cup**, *University of Computer Sciences*, Havana Contestant
- **Cuban Final of ACM-ICPC**, *University of Computer Sciences*, Havana Contestant
- **My website for Cuba**, *University of Computer Sciences*, Havana Relevant
- **Pascal Cup**, *University of Computer Sciences*, Havana Contestant
- **Student Scientific Conference**, *University of Computer Sciences*, Havana Three relevant, one outstanding and three mentions
- **My website for Cuba**, *University of Computer Sciences*, Havana One outstanding and one mention
- **Student Scientific Conference**, *University of Computer Sciences*, Havana Outstanding
- **Pachamama Game Jam**, *University of Computer Sciences*, Havana Third place
- **VI UM Programming Cup**, *University of Matanzas*, Matanzas Third place, Coach
- **CEPROMEDE Scientific Conference**, Provincial Center of Sports Medicine, Matanzas
- **Cuban Final of ACM-ICPC**, *Technological University of Havana José Antonio Echeverría*, Havana Coach
- 2017 XIX International Event "The teaching of Mathematics, Statistics and Computing", *University of Matanzas*, Matanzas, Paper: *César and the numbers*: Computer resource to favor the learning of the operation sum, in the first grade
- 2017 Cyber-physical Systems Seminar: Modeling and Control, University of Matanzas, Matanzas
- **VII UM Programming Cup**, *University of Matanzas*, Matanzas Coach
- 2018 XIV Methodological Scientific Conference of the University of Matanzas, University of Matanzas, Matanzas
- **Local Constest ACM-ICPC**, *University of Matanzas*, Matanzas, 2nd place Coach

- 2018 ACM-ICPC National Competition, Military Technical Institute "Jose Martí", Havana Coach
- 2018 University Forum of Sciences and Techniques, University of Matanzas, Matanzas, Presentation: Application for monitoring systems and mechanical processes from mobile devices
  Mention
- 2018 II International Symposium of the Network of Researchers of Science and Technology: Science and Technological Innovation, Las Tunas, Presentation: Support tool for the probability and statistics subject to graph probability distributions in the distance education study modality of the University of Matanzas
- 2019 Seminario Computational intelligence for modeling and control of industrial cyber physical system: Research challenges and opportunities., University of Matanzas, Matanzas
- 2019 **VIII UM Programming Cup**, *University of Matanzas*, Matanzas Coach and organizer
- 2019 IX International Scientific Convention, VI International Engineering Workshop, University of Matanzas, Matanzas ROFLEXIN/LC system man-machine interface viewer for mobile devices
- 2019 **IX International Scientific Conference**, Holguin University, Holguín Intelligent and low-cost monitoring architecture for mechanical system and processes
- 2019 **ICPC National Competition**, *University of Matanzas*, Matanzas Coach
- 2019 **ICPC Caribbean Regional Final**, *Eastern University*, Santiago de Cuba Coach
- 2020 **First Online Innovation Workshop**, *Technological innovation for music education in pioneering rhythmic gymnastics*, INDER
- 2021 ICPC Caribbean Finals (Qualifier), Provincial Directorate of Education, Matanzas, Preuniversity Teams - Bronze Coach
- 2022 **ICPC Caribbean Finals (Qualifier)**, *University of Matanzas*, Matanzas
- 2022 **ICPC Caribbean Regional Final**, *University of Computer Sciences*, Havana Coach
- 2023 ICPC Caribbean Finals (Qualifier), University of Matanzas, Matanzas, Preuniversity Teams Bronze Coach
- 2023 ICPC Caribbean Regional Final, University of Computer Sciences, Havana Coach

Research

2020 Educating with José Martí in the Cuban school, Education Faculty. University of Matanzas
Collaborator

# Acknowledgments

- 2013 Productive results, Havana, Informatic Science University, Faculty 5
- 2014 **Software developer**, Havana, Informatic Science University, Industrial Computing Center
- 2014 Outstanding, Havana, Informatic Science University, Industrial Computing Center
- 2017 **Guest**, *ACM-ICPC Caribbean Regional Final*, Villa Clara, Central University of Las Villas "Marta Abreu"
- 2018 Guest, ACM-ICPC Caribbean Regional Final, Havana, Informatic Science University
- 2019 Acknowledgment, Outstanding Quality Worker, Matanzas, University of Matanzas
- 2023 **Acknowledgment**, *Competitive programming coach*, Vocational Preuniversity Institute of Exact Sciences *Carlos Marx*, Matanzas