



# Luis Andrés Valido Fajardo

## Curriculum

### Education

- 2008–2013 **Computer Science Engineering**, *University of Computer Science*, Havana
- 2014 **Introduction to the development of the ALBA Comprehensive Supervision and Control System**, *University of Informatics Sciences*, Havana
- 2014 **Introduction to the LaTeX text composition system**, *University of Informatics Sciences*, Havana
- 2014 **Science Technology and Society**, *University of Informatics Sciences*, Havana
- 2014 **Creative group work techniques**, *University of Informatics Sciences*, Havana International Summer School
- 2015 **General Improvement Course for professionals in training**, *University of Informatics Sciences*, Havana
- 2016–2019 **Master in Computer Aided Engineering**, *University of Matanzas*, Matanzas

### Education Online

- 2020 **Course Html**, *Sololearn platform*, Certificate 1014-20521103  
<https://www.sololearn.com/Certificate/1014-20521103/pdf/>
- 2020 **Course C**, *Sololearn platform*, Certificate 1089-20521103  
<https://www.sololearn.com/Certificate/1089-20521103/pdf/>
- 2020 **Course CSS**, *Sololearn platform*, Certificate 1023-20521103  
<https://www.sololearn.com/Certificate/1023-20521103/pdf/>
- 2020 **Course C++**, *Sololearn platform*, Certificate 1051-20521103  
<https://www.sololearn.com/Certificate/1051-20521103/pdf/>
- 2020 **Course SQL**, *Sololearn platform*, 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/>
- 2020 **Course Ruby**, *Sololearn platform*, Certificate 1081-20521103  
<https://www.sololearn.com/Certificate/1081-20521103/pdf/>
- 2020 **Course PHP**, *Sololearn platform*, Certificate 1059-20521103  
<https://www.sololearn.com/Certificate/1059-20521103/pdf/>

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Cidra, Unión de Reyes, Matanzas, Cuba  
12 Marzo 1989

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- 2020 **Course JQuery**, *Sololearn platform*, Certificate 1082-20521103  
<https://www.sololearn.com/Certificate/1082-20521103/pdf/>
- 2020 **Course JavaScript**, *Sololearn platform*, Certificate 1024-20521103  
<https://www.sololearn.com/Certificate/1024-20521103/pdf/>
- 2020 **Course C#**, *Sololearn platform*, Certificate 1080-20521103  
<https://www.sololearn.com/Certificate/1080-20521103/pdf/>
- 2020 **Course Swift 4**, *Sololearn platform*, Certificate 1075-20521103  
<https://www.sololearn.com/Certificate/1075-20521103/pdf/>
- 2020 **Course Python 3**, *Sololearn platform*, Certificate 1073-20521103  
<https://www.sololearn.com/Certificate/1073-20521103/pdf/>
- 2020 **Course React + Redux**, *Sololearn platform*, Certificate 1097-20521103  
<https://www.sololearn.com/Certificate/1097-20521103/pdf/>
- 2020 **Course Angular + NestJS**, *Sololearn platform*, Certificate 1092-20521103  
<https://www.sololearn.com/Certificate/1092-20521103/pdf/>
- 2020 **Course Data Science with Python**, *Sololearn platform*, Certificate 1093-20521103  
<https://www.sololearn.com/Certificate/1093-20521103/pdf/>
- 2021 **Course Machine Learning**, *Sololearn platform*, Certificate 1094-20521103  
<https://www.sololearn.com/Certificate/1094-20521103/pdf/>
- 2021 **Course Python for Beginners**, *Sololearn platform*, Certificate 1157-20521103  
<https://www.sololearn.com/Certificate/1157-20521103/pdf/>
- 2021 **Curso Intermediate Python**, *Sololearn platform*, Certificate 1158-20521103  
<https://www.sololearn.com/Certificate/1158-20521103/pdf/>
- 2021 **Course Python Data Structures**, *Sololearn platform*, Certificate 1159-20521103  
<https://www.sololearn.com/Certificate/1159-20521103/pdf/>
- 2021 **Course Responsive Web Design**, *Sololearn platform*, Certificate 1159-20521103  
<https://www.sololearn.com/Certificate/1162-20521103/pdf/>
- 2021 **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>
- 2021 **Course Python for Data Science**, *Sololearn platform*, Certificate 1161-20521103  
<https://www.sololearn.com/certificates/course/en/20521103/1161/landscape/png>
- 2021 **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  
<http://ehead.umcc.cu/course/view.php?id=105>

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- 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/>

## 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.

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## 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.
- 2021–2023 **Pre -University Institute of Exact Sciences of Matanzas**, *Competitive programming coach*, Matanzas

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## Teaching

- 2016–2016 **Python programming language**, *Informatics Engineering*, Matanzas, University of Matanzas  
5th year

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- 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**, *Rosmary 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

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- 2022 **Plugin to measure the quality indicators of Moodle courses**, *Hansel 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 Sintés*, 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

- Programming language 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 systems Debian, Ubuntu, Window, Android
- Frameworks Qt, Yii, CodeIgniter, 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.*

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Content management system	Joomla, WordPress
	Moodle <i>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)</i>
Database manager	Postgres, MySQL, MariaDB
2D graphic design	Gimp, Inkscape
CASE Tool	Visual Paradigm
Web server	Apache, XAMPP, NGINX
Text processor	LaTeX
Version control	Git
Software development methodology	Extreme Programming (XP)

## 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>)

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- 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*, Holguín 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
- 2021 **The use of mobile devices in Cuban university teaching**, *Academia.edu*, [https://www.academia.edu/47857643/EL\\_USO\\_DE\\_DISPOSITIVOS\\_MOVILES](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

- 2008 **Pascal Cup**, *University of Computer Sciences*, Havana  
Contestant
- 2009 **Pascal Cup**, *University of Computer Sciences*, Havana  
Contestant
- 2010 **Pascal Cup**, *University of Computer Sciences*, Havana  
Contestant
- 2011 **Pascal Cup**, *University of Computer Sciences*, Havana  
Contestant
- 2011 **Cuban Final of ACM-ICPC**, *University of Computer Sciences*, Havana  
Contestant
- 2011 **My website for Cuba**, *University of Computer Sciences*, Havana  
Relevant
- 2012 **Pascal Cup**, *University of Computer Sciences*, Havana  
Contestant
- 2012 **Student Scientific Conference**, *University of Computer Sciences*, Havana  
Three relevant, one outstanding and three mentions
- 2012 **My website for Cuba**, *University of Computer Sciences*, Havana  
One outstanding and one mention

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- 2013 **Student Scientific Conference**, *University of Computer Sciences*, Havana  
Outstanding
- 2015 **Pachamama Game Jam**, *University of Computer Sciences*, Havana  
Third place
- 2017 **VI UM Programming Cup**, *University of Matanzas*, Matanzas  
Third place, Coach
- 2017 **CEPROMEDE Scientific Conference**, *Provincial Center of Sports Medicine*, Matanzas
- 2017 **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
- 2018 **VII UM Programming Cup**, *University of Matanzas*, Matanzas  
Coach
- 2018 **XIV Methodological Scientific Conference of the University of Matanzas**, *University of Matanzas*, Matanzas
- 2018 **Local Condest 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  
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- 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  
Coach
- 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