

José Alejandro Concepción Alvarez

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Date of Birth: September 29th, 1995



Degrees

2014–2019 **Master and Bachelor in Automation Engineering (Single-Cycle, 5 years)**, Biomedical and Automation Faculty, Technological University of Havana (CUJAE), Cuba. Granted the “Scientific Merit Award”
Grade: 4.72/5.

Experience

Professional

2019–Present **Full Stack Developer**, *Guajitech*, Havana, Cuba.

Development of mobile and frontend applications using Javascript frameworks. Backend development using Nodejs framework with relational and non-relational databases like MySQL and MongoDB.

- Ecommerce Platform for the cuban startup Guajitech. Allows B2C and B2B business modalities. Staks: **Angular** | **Nodejs** | **MySQL** | **MongoDB** | **HTML5** | **CSS3**. (<https://www.sinkoola.com>)
- Multimedia streaming web application for educational content on the Cubaeduca Platform. Staks: **Angular** | **Nodejs** | **MySQL** | **MongoDB** | **Dashjs** | **Plyr.js** | **HTML5** | **CSS3**. (<https://cubaeducatv.cinesoft.cu>)
- Website for online trading experiences. It is integrated with several payment gateways. It allows B2C and B2B businesses modalities. Staks: **Angular** | **Nodejs** | **MySQL** | **HTML5** | **CSS3**. (<https://experiencias.havanatursa.com/>)
- Content management system for the website of the Cuban Gaviota SA company. The system includes the landing page and the administration site. Staks: **Angular** | **Nodejs** | **MySQL** | **HTML5** | **CSS3**. (<https://gaviota-grupo.com/>)
- Content management system for the website of the Cuban Marlin SA company. The system includes the landing page and the administration site. Staks: **Angular** | **Nodejs** | **MySQL** | **HTML5** | **CSS3**. (<https://marlin.cinesoft.cu/>)
- Web application for compression and editing of images in the browser. It allows to crop the images, reduce their size and switch between the formats (jpeg, png, webp) Staks: **JavaScript** | **HTML5** | **CSS3**. (<https://cogetuimagen.cubanearme.com>)
- Hotel management and sale system for the Havanatur SA company. The system allows the creation of hotels and management of their availability. Allows B2B and B2C business modalities. Staks: **Angular** | **React** | **Nodejs** | **MySQL** | **JavaScript** | **HTML5** | **CSS3**. (<https://hoteles.havanatursa.com>)

- 2019–2020 **Intern professor**, *Technological University of Havana (CUJAE)*, Cuba.
Teaching *Microcontroller I*: Internal architecture of the 8051 microcontroller, programming in assembly and C language.
Teaching *Introduction to Matlab I*: Programming at Matlab, Basic concepts, development environment, programing problems and simulation of physical processes using the MatLab Tool

Vocational

- 2018–2019 **Research Assistant Student**, *CUJAE*, Cuba.
Design of a Two Wheel Self Balancing Robot: Design of a two wheel self-balancing robot based on the Arduino microcontroller, development of PID algorithms, complementary filter, and Kalman filter. (<https://youtu.be/dg8ftpSStIc>)
- 2018–2019 **Research Assistant Student**, *CUJAE*, Cuba.
Development of a simulator for an inverted pendulum system: Development of simulation software for the kinematics of an inverted pendulum system on wheels. Testing of PID control algorithms. (<https://youtu.be/06BeBPsemHU>)
- 2016–2018 **Research Assistant Student**, *CUJAE*, Cuba.
Designing a Robotic Platform with Ackerman steering geometry and Development of Tracking and Path Planing Algorithms for Wheeled Mobile Robots. <https://youtu.be/Kv2xxKv3fYU>)
- 2015–2017 **Assistant Student**, *CUJAE*, Cuba.
Teaching *Object-oriented programming*: Introduction to the C ++ language, fundamental characteristics, functions, classes, inheritance, polymorphisms, data structures and algorithms

Research

Research projects

- 2019 “*Design of a Two Wheel Self Balancing Robot*”, J. Alejandro Concepción.
- 2018 “*Design and development of a mobile robot with ackermann kinematic model compatible with the rosi platform*”, J. Alejandro Concepción, Alfredo J. Fernández Rodríguez, Joaquín Amigó Vega, Juan A. Piñera García, Roger Casimiro Martínez.

Presentations

- 2019 “*Design and Implementation of a Robot with Ackermann steering geometry*”, Seminar presentation offered at the University Science Fair, University of Havana.
- 2019 “*Design and Implementation of a Two Wheel Self Balancing Robot*”, Seminar presentation offered at the University Science Fair, University of Havana.

Contribution to open source

- 2021 **ngp-enter-section** “*Angular library for creating animations on web content. Creates transitions on the X and Y axes that create the nice effect of entering content as the user scrolls.*”.
- 2021 **ngp-lazy-load** “*An angular npm package for the lazy loading of images, ifrmes, object and any content that have children nodes, it improve the web site performance*”.
- 2020 **ngp-image-picker** “*An angular npm package for the selection, edition and compression of images*”.
- 2020 **ngp-material-rating** “*A angular npm package for editing and showing rating variables*”.

Awards and certifications

Awards

- 2019 *"Scientific Merit Award"*. Awarded upon graduation for the scientific work developed during the career. Granted by the University Council and the University Students Federation at the CUJAE, Cuba
- 2018 *"Design and Implementation of an Autonomous Robot with Ackermann steering geometry"*. Awarded 4 firsts prices on the 2018 Science Forum in the Committees of Instrumentation, Hardware, Software and Control at the CUJAE, Biomedical and Automation Engineering Faculty, Cuba
- 2018 *"Design and Implementation of an Autonomous Robot with Ackermann steering geometry"*. Awarded third price on the 2018 Science Forum in the Electronics and Programming Committee at the University of Havana, Physics Faculty, Cuba
- 2017 *"Mechanical design of a Robot with Ackermann steering geometry"*. Awarded first price on the 2017 Science Forum in the Poster Committee at the CUJAE, Mechanical Engineering Faculty, Cuba

Certifications

- 2018 *"The 2018 ACM-ICPC Caribbean Local Contests"*. Rank: 13, CUJAE Finals Champions, Cuba
- 2018 *"The 2018 ACM-ICPC Caribbean National Contests"*. Rank: 31, 2018 Cuban Finals, Cuba
- 2018 *"The 2018 ICPC Caribbean Finals"*. Rank: 16, 2018 Caribbean Finals, Cuba
- 2017 *"The 2017 ACM-ICPC Caribbean National Contests"*. Rank: 24, 2017 Cuban Finals, Cuba
- 2017 *"The 2017 ACM-ICPC Caribbean Finals"*. Rank: 30, 2017 Caribbean Finals, Cuba

Languages

Spanish	Native Language
English	Full Professional Proficiency

Related Skills

Social:

Teamwork, Team Management, Project Management, Public Speaking, Teaching.

Programming languages:

Python, C, C++, MatLab, HTML/CSS, JavaScript, TypeScript

Robotics:

Mechanical Design, Speed Control, Path Control, Path Planning, Localization, Obstacle Detection.

Frameworks:

Angular, React, Nodejs, Ionic, Flask

Databases:

MySQL, MongoDB

Digital Systems:

PICs, Intel 8051 and ARM Microcontrollers, Altera and Xilinx FPGAs with VHDL, Arduino and Raspberry Pi.

Electronics:

Signal Processing, Printed Circuit Board Design, Digital Design and Prototyping.

Operating systems:

Linux, Windows and IOS

Version Control Systems:

Git.

Courses

Postgraduate

- **JavaScript Algorithms and Data Structures Masterclass**: january 2021 to march 2021, offered by Colt Steele, <https://www.udemy.com/course/js-algorithms-and-data-structures-masterclass/>
- **The Ultimate MySQL Bootcamp: Go from SQL Beginner to Expert**: september 2020 to november 2020, offered by Colt Steele, <https://www.udemy.com/course/the-ultimate-mysql-bootcamp-go-from-sql-beginner-to-expert/>
- **NodeJS The Complete Guide(Express, MySQL, MongoDB, Send Mails, GraphQL)**: december 2019 to february 2020, offered by Academind, Maximilian Schwarzmüller, <https://www.udemy.com/course/nodejs-the-complete-guide/>
- **Angular - The Complete Guide**: february 2019 to may 2019, offered by Academind, Maximilian Schwarzmüller, <https://www.udemy.com/course/the-complete-guide-to-angular-2/>

Pregraduate

- **Python for Everybody Specialization**: july 2017 to august 2017, offered by Michigan University, <https://www.coursera.org/specializations/python>
- **Algorithms, Part I**: january 2016 to april 2016, offered by Princeton University, <https://www.coursera.org/learn/algorithms-part1>
- **Machine Learning**: july 2015 to december 2015, offered by Stanford University, <https://www.coursera.org/learn/machine-learning>
- **Control of Mobile Robots**: march 2015 to june 2015, offered by GeorgiaTech, <https://www.coursera.org/learn/mobile-robot/home/welcome>