Contact

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github.com/Adsuarez (Company)

Top Skills

Cloudflare

Tailwind CSS

TypeScript

Andres David Suarez Q

Electronic engineer, mechatronics technologist and software developer
Hollywood, Florida, United States

Experience

freelance
Software Developer
September 2025 - Present (2 months)
United States

Project 1: junticos.com -> Personal project for a website about educational games for children. (Private repository on GitHub)

Project 2: cvrapido -> Personal project for reading PDF resumes and organizing different versions of them in an easy, maintainable, and up-to-date way. Compatible with LinkedIn's auto-generated PDF. (Public repository on https://github.com/Adsuarez/cvrapido)

Stack: Astro framework, TypeSctipt, JavaScript, NodeJs, HTML, CSS, Tailwind, Cloudflare.

ingepatata
Content Creator
March 2025 - Present (8 months)
United States

Creator of educational content on robotics, electronics, programming, engineering, and general technology topics.

Fedesoft
Project mentor
July 2025 - October 2025 (4 months)
Colombia

Stack: Arduino, TinkerCad.
Mentor of the Patonauta project in the ninth national programming competition of Colombia.

Ambientart
Electrician
August 2025 - August 2025 (1 month)
Florida, United States

- Electrical installation of outlets to avoid the unsafe use of extension cords

- Electrical lighting installation to improve staff visibility

- Installation of an overhead power outlet system for handling clothes irons

Fundación CREA
Web Developer
August 2024 - December 2024 (5 months)
Cali, Valle del Cauca, Colombia

Technologies: HTML, CSS, JavaScript, Astro.

Achievements:

- Teamwork with a web designer to implement design guidelines.

- Application of SEO best practices.

- Agile development with clients.

- Responsive design.

Fedesoft
Project mentor
August 2024 - November 2024 (4 months)
Cali, Valle del Cauca, Colombia

Mentor of the 2024 National Programming Competition

Technologies: Arduino

Achievements:

- Placed among the top 10 finalists from hundreds of participants

- Restructured the M2JC project to create the minimum viable product

- Assigned roles and tasks to students

- Agile development of meetings, assignments, and activities

- Provided ongoing support to students and the responsible teacher

Colegio Sigmund Freud
Robotics Instructor
February 2024 - November 2024 (10 months)
Yumbo, Valle del Cauca, Colombia

Technologies: C++, Arduino.

Achievements:

- Construction of 12 educational robots for a robotics competition,

- Implementation of constructivist pedagogy

Global Business Group
Software Engineer
October 2023 - March 2024 (6 months)
Colombia

Frontend: ReactJS, NextJs, JavaScript, HTML, CSS

Backend: NodeJs, BunJs, ElysiaJS, SQLite

KEY ACCOMPLISHMENTS:

- GitHub CI/CD with render.com of the BunJs backend

- CI/CD with vercel.com of NextJs frontend

- Agile development

- RESTFull API creation and testing

- Code best practices for scalability and maintainability

Fundación CREA
Robotics Instructor
September 2022 - October 2023 (1 year 2 months)
Cali, Valle del Cauca, Colombia

STACK: Processing, Arduino, Lego NXT, TinkerCad.

KEY ACCOMPLISHMENTS:

Consolidate the continuity of 18 students from the Programming course to the Robotics course,

Enrich the creativity and scientific and mathematical knowledge of students,

Empower students to develop extracurricular projects such as video games and school projects,

Promote the marketing campaign for the growth of the foundation, managing to incorporate new students.

DISERVI - Diseños y Servicios Industriales
Web Developer
June 2023 - July 2023 (2 months)
Yumbo, Valle del Cauca, Colombia

STACK: Frontend (JavaScript, HTML, CSS), GitHub.

Visit the frontend repository: https://github.com/Adsuarez/diservi-frontend

KEY ACCOMPLISHMENTS:

Core Web Vitals optimization using Google Chrome tools, UX/UI validation with real users, Application of efficient practices for SEO, Static website deployment on Amazon Web Services (AWS), S3, Route 53, Certificate Manager, and CloudFront services.

Dot Training (technical interview test assignment)
Software Developer
May 2023 - May 2023 (1 month)
Yumbo, Valle del Cauca, Colombia

STACK: Frontend (NextJ, ReactJs, JavaScript, HTML, CSS), Backend (NodeJs, JavaScript, Express, MySQL), GitHub, PlanetScale, Fly.
Visit the frontend repository: https://github.com/Adsuarez/DOTTraining-frontend
Visit the backend repository: https://github.com/Adsuarez/dottraining-backend

KEY ACCOMPLISHMENTS:
Gathering or requirements and criteria for acceptance,
Form validation with scalable and maintainable implementation of JavaScript without requiring external dependencies,
Unit and integration testing for validation of data schemas and endpoints,
Creation of REST API for the management of users with the category of teacher and student, with their respective degrees of authorization,
Management of the Teacher type user to create courses and the Student type user to enroll in them,
Storage in MySQL database, with automatic elimination of courses that are not current,
Efficient, scalable and maintainable graphical interface development using ReactJs,
Continuous integration and continuous deployment through Github, Vercel and NextJs,
Server deployment on Fly.io,
Database deployment on PlanetScale.com.

Moviender (Study practice project)
Software Developer
January 2023 - May 2023 (5 months)
Yumbo, Valle del Cauca, Colombia

STACK: Frontend (NextJ, ReactJs, JavaScript, HTML, CSS), Backend (NodeJs, JavaScript, Express, MySQL), GitHub, Railway.
Visit the demo: https://moviender.vercel.app/
Visit the frontend repository: https://github.com/Adsuarez/moviender
Visit the backend repository: https://github.com/Adsuarez/moviender-backend
KEY ACCOMPLISHMENTS:
Built the logic to register on the platform, validating the data on the server and feeding it into the database,
Continuous integration and continuous deployment with GitHub and Railway.app for the server and the database.

Endpoint integration testing to create users, verifying the correct validation of the data transfer objects (DTO), the middleware and the corresponding response errors,

Creation of integrated RESTful API to create, read, load and delete users (CRUD),

Implementation of JavaScript for data validation, without increasing the Bundle by not requiring third-party dependencies,

Componentization of graphical interfaces in an efficient and scalable way using ReactJs,

Continuous integration and continuous deployment with GitHub and Vercel for the frontend.

EmployeesAPI (technical interview test assignment)
Software Developer
April 2023 - April 2023 (1 month)
Yumbo, Valle del Cauca, Colombia

STACK: Backend (Python, DJango REST Framework, PostgreSQL), GitHub, Docker, Render.

Visit the backend repository: https://github.com/Adsuarez/backend-employees
KEY ACCOMPLISHMENTS:
Create a REST API to manage employees with the corresponding HTTP responses.

Implement continuous integration and continuous deployment with GitHub and Render.com.

Deploy a database PostgreSQL in Render.com.

Union Plastica SAS
Maintenance Lead
August 2021 - August 2022 (1 year 1 month)
Yumbo, Valle del Cauca, Colombia

Achievements:

- Optimization of maintenance times thanks to the implemented spare parts and machinery supplies storage system.
- Efficiency in the manufacturing of the PinHoles machine, thanks to the 3D redesign of the structure, based on the conditions for machining, assembly, and welding of parts in parallel.
- Reduction of time losses through training of production personnel in the proper handling of equipment and machinery.

Main Duties:

- Leadership and execution of corrective and preventive maintenance at the production plant.
- Design and manufacture of machines, parts, and 3D and 2D drawings in SolidWorks.
- Inventory control of the maintenance warehouse.
- Document control of chemical substances and hazardous waste from the process.

Cargill
Design Engineer
January 2021 - August 2021 (8 months)
Candelaria, Valle del Cauca, Colombia

Achievements:

Successful update of the emergency and evacuation plan for the main Cargill plant in Candelaria.

Implementation of product and personnel route plans at the Cargill plant in La Nubia.

Supported project engineers in decision-making by developing designs that ensure the viability of an expansion project.

Main Duties:

Measurement and drawing.

2D and 3D design of mechanical parts, machines, and building structures.

Design of special plans for compliance with company regulations (evacuation routes, product flows, personnel flows, waste flows, hydraulic profiles of water treatment plants).

Independent
Electrician
April 2021 - June 2021 (3 months)
Yumbo, Valle del Cauca, Colombia

Design, definition of materials, purchase of materials, and complete electrical installation of electrical outlets, lighting, switches, and breakers.

UVX20 Disinfection Machine (Personal Project)
Mechatronic
May 2020 - November 2020 (7 months)
Yumbo, Valle del Cauca, Colombia

Achievements:

- Effective integration of serial communication between the Arduino embedded system and the Nextion touchscreen.
- Battery charging and electrical protection control for the remote control.
- Effective integration of radio frequency communication between the remote control and the disinfection machine.
- Design and construction of the machine's rugged metal structure for use in clinical settings.

Main Functions:
- Research and operational design of the machine.
- Quotation of parts and components.
- Printed circuit board design and manufacturing.
- Microcontroller programming.
- Remote control graphical interface programming.
- Design and 3D printing of the remote control housing.
- Assembly and integration of mechanical and electrical systems.

Assisted ventilation equipment (Personal project)
Mechatronic
March 2020 - September 2020 (7 months)
Yumbo, Valle del Cauca, Colombia

Achievements:
- Comprehensive research on the theoretical framework surrounding human respiration and mechanical ventilators.
- Effective implementation of the mechatronic system for assisted respiration.
- Integration of knowledge between interdisciplinary engineering and medical teams.

Main Duties:
- Research, documentation, and operational design of the machine.
- Quotation of parts and components.
- Programming of the Arduino Nano microcontroller.
- Design in SolidWorks and 3D printing of parts.
- Assembly and integration of mechanical, electrical, and pneumatic systems.

Teclife - Comercio De Produtos E Equipamentos Medico-Hospitalares
Mechatronic
June 2018 - February 2020 (1 year 9 months)
Yumbo, Valle del Cauca, Colombia

Achievements:

- Winning second place in the ValleE competition organized by the Cali Chamber of Commerce, thanks to the prototype developed.
- Effective communication between the microcontroller and the user interface.
- Development of a user interface for device manipulation on an OLED and color display.

Main Duties:

- Conceptual design of operation.
- Quotation of parts and components.
- Design and manufacture of PCB printed circuit boards.
- Microcontroller programming.
- Design and 3D printing of the housing.
- Assembly, commissioning, and improvements.

POSTOBON S.A.
Industrial Electrician
May 2018 - February 2020 (1 year 10 months)
Yumbo, Valle del Cauca, Colombia

Achievements:

- Successful representation of the maintenance team in the ISO 31000 audit (Risk Management in Food Production).
- Effective integration of the Quality and Maintenance processes for the operation of the glass bottle inspection machine.
- Coordination of activities to improve the work environment.
- Reduction in product, input, and time losses through training of Production and Maintenance staff.
- Development of documentation for the effective operation of the HEUFT glass bottle inspector.

Main Duties:

- Operation, adjustment, and maintenance of the HEUFT electronic returnable container inspector.
- Maintenance of Siemens drives, various electrical repairs, and organization of electrical wiring.
- Production line presentation conversions.
- Operation, adjustment, and maintenance of VideoJet and Markem Imaje inkjet and laser coders.
- Operation, adjustment, and maintenance of Krones beverage processors.
- Generation of alerts and reports in SAP ERP software.

ROBOTSchool Colombia
Robotics Instructor
November 2019 - December 2019 (2 months)
Cali, Valle del Cauca, Colombia

Achievements:

Successful completion of the Christmas robotics course for children by 10 students.

Main duties:

Facilitator of practical robotics classes based on Arduino, Lego Mindstorm, Lego Boost, Lego EV3, and mBot. For children and adolescents.

Fundación Educativa CES - Colegio Mixto Fray Peña
Robotics Instructor
May 2019 - November 2019 (7 months)
Yumbo, Valle del Cauca, Colombia

Achievements:

- Enriched students' creativity and scientific and mathematical knowledge.
- Successful completion of the Robotics for Children course by 11 students.
- Participated in the school fair with students, presenting robotic grippers and a 3D printer.

Main Duties:

- Designed and facilitated the robotics course for children ages 7 to 12.
- Provided practical instruction in basic electrical concepts through the use of a multimeter and the identification of the most common electronic components.
- Introduction to programming using the HourOfCode website.
- Introduction to robotics with Lego Mindstorm.
- Taught Arduino programming and simulation using the online software ThinkerCad.
- Taught Arduino C++ programming through the use of active and passive robotics components.

Liquor making machine (Customer: Alvaro Rengifo)
Mechatronic
May 2017 - December 2017 (8 months)
Cali, Valle del Cauca, Colombia

Achievements:

- Efficient program for preparing liquors in 750mL bottles,
- Security control using GPS tracking of the machine,

- Systematic delivery of machine inputs through a user interface,

- Robust structure suitable for operation in bars, restaurants, and nightclubs,

- Integration of electronics and web development for sending operational data to the database.

Main Functions:

- Electronic simulations using Proteus software,

- Programming code design in C++, Arduino, and ESP32,

- Design and manufacture of electronic circuit boards (PCBs) using Eagle software,

- Development of tests for analysis and improvement of performance,

- Assembly of parts, components, lighting, electronic circuits, and control panel wiring.

MaquinArte (Personal project)
Mechatronic
December 2015 - February 2017 (1 year 3 months)
Yumbo, Valle del Cauca, Colombia

Technologies: Microchip Technology, Proteus Circuit Simulator, Eagle PCB Design.
Achievements:

- Construction of a fun machine for children to use, using sounds and buttons to decorate cupcakes.

- Integrated software development in C language for the process involving 3 solenoid valves, 2 servomotors, 1 DC motor, 6 reed switch sensors, 13 switches, dozens of LEDs, and a sound amplifier.

MS CONSULTORES S.A.S
Quality management system leader and consultant
June 2012 - February 2013 (9 months)
Cali, Valle del Cauca, Colombia

Implementation of quality management systems, maintenance of the ISO 9001 quality management system at MS CONSULTORES S.A.S, quality management system diagnostics, quality management system audits, and quality management system training for consulting clients.

Education

Autodidact

Full-stack web development, Computer Software Engineering · (August 2022 - December 2025)

Coursera
Google Data Analytics Professional Certificate, Computer Science · (August 2025 - October 2025)

Cisco Networking Academy
Ciberseguridad, Seguridad informática y de sistemas · (August 2024 - December 2024)

Institución universitaria Antonio José Camacho
Electronic engineering, Electrical and Electronics Engineering · (February 2020 - December 2022)

Institución universitaria Antonio José Camacho
Mechatronics Technologist, Mechatronics, Robotics, and Automation Engineering · (February 2014 - June 2017)