



# David de los Santos Cuy Sánchez

*Mechatronics Engineer*

## Summary

I'm a Mechatronics Engineer with experience as web Full-Stack developer with expertise in many languages, frameworks and technologies like Python (Serverless Framework, azure functions, Flask), Laravel, and Angular for frontend. I implemented many Devops technologies and also I work with Docker containers. I have experience integrating software and hardware for IoT projects. I also work with electronic design, processing signals, microcontroller, linux embedded systems. My passion is about techs development and computer vision systems.

## Experience

- 2021–Actual **Application Architect**, *diram S.A. de C.V.*, San Pedro Garza García, Nuevo León.
- Company with expertise in Electric Network Code, from electric analysis to develop product for harmonic distortion attenuation and optimizing power factor. My labor is:
    - Optimize actual cloud systems for performance and costs
    - Migrate VMs architecture to Serverless application
    - Implementing systems for continuous integration and continuous deployments.
    - Training to IT personal for software development
- 2020–2021 **FullStack Developer Senior**, *Gesta Labs VG S.A.P.I. de C.V.*, Monterrey, Nuevo León.
- An solutions for Industry 4.0 maker company, implementing digital twins, smart transport, production lines and logistics solutions.
  - **Projects**
    - *Inventory management* - KPIs generator and management system develop for **Logistic department of Coca-Cola Femsa**
    - *Copilot* - Virtual assistant with voice recommendations develop using AI for reduce gas consumption of trucks of **Coca-Cola Femsa México** (Pilot)
    - *Defects Inspector* - An inspector and detector device of plastic injection automotive parts using computer vision algorithms with a dashboard of historic and metrics of manufactured pieces. Made for **Nemak company**

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- 2020–2021 **Co-Founder & CTO**, *Soluciones digitales para la industria y energía S.A.P.I. de C.V.*, Monterrey, Nuevo León.
- Firmware development
  - Web development (Backend PHP - Laravel y Frontend Angular)
  - AWS cloud architecture design
  - Web platform deployment on AWS in different environments (Dev, Demo, Production)
  - **Project description**
    - AVi Energy Labs is an industrial machinery energy monitoring system on AWS platform. It uses many services as [ EC2, RDS, VPC, Security Groups, S3, Glue, Athena, ElastiCache, SNS, SQS, etc... ]
- 2017–Actual **Co-Founder & Technology director**, *Centro de Innovación y Desarrollo Studio AV S.A.P.I. de C.V.*, Mérida, Yucatán.
- Firmware development
  - Web development (Backend - Frontend)
  - Planning and teaching workshops and courses
  - **Projects**
    - *Decide Market Design* - Automated massive phone call system for public interest poll
    - *Swapp Pay* - Automated payment and billing system for taxi drivers
    - *Puntié* - Ballerina's movement sensor, this one was a participant in **Shark Tank México** TV show
    - *Vinden* - Urban transport integral system (Passenger counter module)
    - *SWAPP Cloud* - Taxis management and control system (Principal view update)
    - *Sinbio dispenser* - Level liquid meter monitoring system
    - *Electronics and microcontrollers workshops and courses*
- 2016–2017 **Web Jr development**, *Desarrollo de Proyectos de Ingeniería del Suereste S.A. de C.V.*, Mérida, Yucatán.
- Actividades y proyectos:
- Zenzzter - Data analysis web page development
  - UrbaTv - Start-up of local server
  - Vinden - Passenger counter sensor development
  - Course teaching "Introducción a Raspberry pi"
  - Minis2000 - Project leader of web development
- 2013 **Arduino workshop teacher**, *Facultad de Ingeniería UADY*, Mérida, Yucatán.

## Education

- 2011–2016 **Bachelor's degree in mechatronics engineering**, *Universidad Autónoma de Yucatán*, Mérida, Yucatán, México, *Mechatronics Engineer*.

### Relevant Courses

- 2019 **Impartición de cursos de formación de capital humano de manera presencial grupal**, *Consejo Nacional de Normalización y Certificación de Competencias Laborales*, Mérida, Yucatán, México.  
Folio CONOCER: D-0005696419.
- 2019 **Black belt**, *dev.f*, Mérida, Yucatán, México.  
Architecture design to create web applications (60 hours).

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## Skills

### Arquitectura Cloud

- AWS
  - EC2 - Security Groups - VNETs
  - RDS
  - DynamoDB
  - Lambda Functions
  - Glue - Athena
  - IoT Core - IoT Greengrass - IoT Analytics
  - SQS - SNS
  - S3
  - ECS - ECR (Docker)
- Azure
  - VMs
  - Database as a Service
  - Azure Functions
  - Lambda Functions
  - Blob Storage
  - Service Bus
  - IoT Hub - IoT Edge
  - Container Registry

### Software development

- DevOps
  - Bitbucket pipelines
  - Github Actions
  - Docker
- Backend
  - PHP - Laravel Framework
  - Python - *Serverless Framework* - *Azure Functions* - *Flask (API)*
- Frontend
  - HTML5 - CSS3 - Javascript - TypeScript
  - Frameworks *Bootstrap* - *JQuery* - *Angular*
- Python
  - OpenCV
  - Pandas
  - Scrapy
  - BeautifulSoup
- Database
  - SQL (MySQL)
  - NoSQL (DynamoDB)
- Others
  - C#
  - C++
  - C

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Embedded systems

- Cypress
- Atmel
- Espressif
- Raspberry Pi

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## Languages

Spanish Native  
English Intermediate

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