

Adrián Constante | DATA ENGINEER

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WORK EXPERIENCE

HAVVOX IT | D365 SOFTWARE DEV JR

Mazatlán, Sinaloa | February 2022 - February 2023

- I was able to complete at least 30 issues related to bugs, new forms and tables, and the way data was displayed on the Dynamics 365 ERP putting attention to details, which was reflected on the client's satisfaction.
- Using MS SQL Server as DBMS, activities were related to the **creation of data visualization and stored procedures** in order to explain to coworkers in less technical areas how tables were related, which doubled the speed they resolve their tasks, saving them time.
- Another main data responsibility was to create and maintain data entities on the ERP, which **were used to import and export data from the ERP to other systems**.
- Other days **effective communication of work to stakeholders** was done before production deploy in the simplest way possible.
- During this role i was able to **learn how to work with high adaptability** and how to **work with a client and stakeholders** in order to **deliver the best possible solution to their problems**.

CONSEIL EUROPÉEN POUR LA RECHERCHE NUCLÉAIRE | RESEARCH ASSISTANT

Meyrin, Switzerland | Nov 2018 - Dec 2018

- Teamwork mission was to enhance AD and V0 ALICE's detectors with a proposed new sensor, our main goal was to prove in practice that this proposed sensor could be used. As a team, we developed a test bench to measure the performance of the sensor, where **my main task was to develop the software to extract, transform and load data from the sensor**.
- High-end oscilloscope measures were done to proof UAS proposed sensor could be used. All of this was done on C++, Python and ROOT, along statistical data analysis. We finally obtained an **increase of 15% of the number of particles detected per second** which led to higher quality data representation. Hence **the project was in count for the next cycles of upgrades of ALICE**.

UNIVERSIDAD AUTÓNOMA DE SINALOA | RESEARCH ASSISTANT

Culiacán, Sinaloa | Sep 2018 - Oct 2018

- We described the LVDS and HSMC protocol on FPGA to **read data from a repaired by us ADC in order to make it work as planned**.
- It was prep work for the next project which was to include the measurement module in ALICE at CERN. We decided roles, **i was chosen to develop data pipeline to make data analysis possible** once in CERN, i acted with **leadership** and bring the time management for each task once in CERN.

CINVESTAV DEL INSTITUTO POLITÉCNICO NACIONAL | RESEARCH ASSISTANT

Zapopan, Jalisco | Nov 2017 - Dec 2017

- Analytical thinking and collaboration was put into project was called "Haptic Robot Arm for Rehabilitation of the Upper Limbs". It was aimed to help kids with rehabilitation of their entire superior members. **Robot was able to achieve an increase of 10% of the strength of the kids' both arms**.
- Python and MATLAB was used by me to do the data modeling and calculations. **I was in charge of simulation and data visualization which were done in Tableau**. Finally we used SolidWorks to do the 3D modeling of the robot.

EDUCATION

MSc. Computer Science

Zapopan, Jalisco |

CENTRO DE INVESTIGACIÓN Y ESTUDIOS AVANZADOS DEL INSTITUTO POLITÉCNICO NACIONAL

Coursework: Software Engineering, Data Structures and Algorithms, Machine Learning, Distributed Systems

BSc. Biomedical Engineering

Mazatlán, Sinaloa |

UNIVERSIDAD POLITÉCNICA DE SINALOA

Coursework: Databases, Object Oriented Programming, Image & Signal Processing, Time-series data.

MAJOR PROJECTS

ELECTRONIC HEALTH RECORD SYSTEM(2020)

BLOCKCHAIN, IPFS, CLOUD COMPUTING, AGILE

- Agile mindset was put to work a distributed database about EHR, ensuring the fidelity and secrecy of patient data. **I was taking care to launch the access control on who can CRUD patient and medical workers data and how data was retrieved to get uploaded to the distributed storage IPFS.**
- The Ethereum Smart Contracts needed were developed with Truffle framework, once ready deployment was done on Kovan Ethereum testnet and IPFS storage.

FACIAL GESTURE-DRIVEN WHEEL CHAIR(2018)

OPENCV, CNN, PYTHON, DATA PIPELINES, TABLEU, MACHINE LEARNING

- A special electric wheelchair was build for quadriplegic people using computer vision and deep learning (CNN). **Results were 90% accurate**, which were visualized on Tableau among other parameters. **I was in charge of the data acquisition and the data pipeline to train the model.** We used and trained a PyTorch image classifier, ResNet18.

SEAHAWK: SECURITY FOR MAZATLAN'S BEACHES(2018)

OPENCV, CNN, AWS, PYTHON, CLOUD COMPUTING, MACHINE LEARNING

- Creativity project was a computer vision system able to recognize if people were too off the coast. Main idea was to help lifeguards in Mazatlan Beaches so we used a Mask-RCNN implemented on TensorFlow.
- **My main task was to segment the video between beach, sea, and people**, then with help of my team train the model on AWS instance. We won a hackathon with it.

A HAPTIC ROBOT ARM(2017)

ROBOTICS, CONTROL THEORY, MATLAB, ARDUINO

- Main mission was to develop the firmware of a planar haptic robot arm to help kids with rehabilitation of their entire superior members. The robot was designed and manufactured with help of SolidWorks.
- **I coded routines like circle movements to help them to improve, then retrieve data to measure how their improvement was.** PID control and robotics calculations were done on MATLAB and Arduino.

SKILLS

Languages: Python, SQL, NoSQL

Cloud: AWS, Azure, Snowflake

Continuous learning: Google Data Analytics, Azure Developer Associate

Hardware: Raspberry Pi, Internet of Things

Databases: SQL Server, MongoDB, PostgreSQL, MySQL

Tools: Git, Tableau, Power BI, Excel

Libraries: Spark, Kafka, Hadoop, Airflow

Other: Agile, Github, Azure DevOps, GitLab