

# Rafael Oliva

## Mechatronics Engineer

Strategist and results driven with 3+ years of experience in the area of engineering, economic data analysis, power grid design and web design. Recognized as a creative, determined, flexible, leader and fast learner. With the ability to design and develop applications to fulfill specific tasks in the programming, electronics and electrical areas.



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Guatemala City, Guatemala



## Technical Abilities

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Object Oriented  
Programming

SQL Server

R

MATLAB

Python

Javascript

Machine Learning

Microsoft Office Suite

Java

Assembler

Siemens Automation S7  
PLC

Tableau

Power BI

CSS

MySQL

HTML

Bootstrap

SCRUM Methodology



## Work Experience

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### Freelance Agent

Various Projects

27/02/2022 – Present

### Ikopedo

Operational and Data Analysis Engineer

01/01/2021 – 31/01/2022

#### Work related achievements

- Supervising engineer for the development of major infrastructure projects
- Development of the website for the Zona Industrial Uno project
- Data mining, cleaning and analysis of Industrial Zone One Project (Q. 46M -> \$. 5.90M)
- Implementation of SCRUM Methodology in the construction area for the development of projects

- Use of Supervised Machine Learning Time Series regression model with ARIMA to determine the feasibility of the Industrial Zone One project on a rental model for a life cycle of 15 years (taking into account the over-inflation of the year 2021)
- Use of the Supervised Machine Learning Time Series regression model with ARIMA to determine the viability of the Zona Industrial Uno project on a sales model for a 5-year sales cycle
- Data visualization based on Machine Learning models with Power BI for presentation to BAM, BAC, Bi and Fichosa
- Elaboration of a predictive model for the evaluation of feasibility and maintenance of the project in Ingenio Pantaleón on the use of machinery for the '21 - '22 harvest
- Coordination of internal logistics for optimized shipment of materials to projects around the country.
- Work with shareholders to analyze information to obtain bank capital for the Zona Industrial Uno project
- Planning of engineering tasks throughout the project execution period
- Supervisor and verification of welding processes and rectification of quality of connections and welding in metallic elements

## Minería Futura

Jr Engineer analyst

15/12/2018 – 25/12/2020

### Work related achievements

- Development of statistical models with Machine Learning to determine the feasibility on the project “Taller Industrial Movimientos Massivos” project of Q. 16M
- Collection, cleaning and visualization of data with POWER BI and SQL SERVER for evaluation of the project with the board of directors.
- Supervising Engineer of infrastructure projects, assembly, and project budget CGN Mechanical Workshop (Q. 2.6M)
- Elaboration of program in Python | SQL Server for the calculation of materials in civil projects
- Design and development of a mechanical drill for drilling vertical slopes with a 5HP three-phase motor.
- Assistance to the design of the electrical network of the mechanical workshop and welding workshop
- Assistance in supervision of projects in the engineering area around the country
- Analysis and development of mathematical models in the correlation between investment in advertising and approach of new clients
- Analysis and study of internal specifications of heavy machinery for the acquisition of new fleet

## HERGO

Mechanic assistant

10/10/2013 – 03/01/2015

### Work related achievements

- Dismantling of Cabins of Articulated Trucks 740/740JEB
- Disassembly of Tractor Cabs D6/D8
- Support in disassembly of D6 and D8 tractor engines
- FIORI Mixer Feed Hopper Assembly

## US Fumigation

Fumigation Assistant (Summer job)

17/10-2010 – 18/12/2015

### Work related achievements

- Preparation of Excel formats for data optimization and ease of collections
- Development of 2D plans of customer stores for the establishment of rubber bands, traps, entrances and more.

- Learning gel application, and distribution of chemicals in warehouses around the country.



## Education

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### BS on Mechatronics Engineering

Universidad del Valle de Guatemala

- Thesis on "Wireless data transfer through the visible electromagnetic spectrum in a controlled environment"

### High School

Colegio El Shaddai



## Skills and Competencies

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Data Analysis

Planning of Project and  
business strategies

Quick learner

Web developer

Process Automation

Critical Thinking and ease  
of adaptability

Design of analytical  
algorithms



## Languages

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### Spanish

*C2 – Native*

### English

*C2 – Bilingual (Proficient)*

### German

*A2 - Elementary*



## Certifications

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- Python Certificate by Google
- Google Data Analytics Professional Certificate
- Stanford Machine Learning Specialization (DeepLearning.AI) In Process (finalize November 2022)



## GitHub

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- <https://github.com/RandomAlien3096>