

# ALEJANDRO RODRIGUEZ

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[Linkedin](#) | [GitHub](#) | [Portfolio](#)

## EXPERIENCE

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### St. Clair College | Researcher

Windsor, Ontario | October 2022 - Jul 2023

- Created and managed the REDCap database for the 1000 Books Before Kindergarten project.
- Designed and created in REDCap the data entry forms and survey of the pre-test and post-test research.
- Monitored data quality and performed quality control checks.
- Created a descriptive data analysis report with user-friendly graphics to visualize survey results.

### St. Clair College | Student Assistant

Windsor, Ontario | July 2022 - October 2022

- Developed an application to track and manage the process flow for requesting changes in college programs with the use of Power Automate and Microsoft Forms.

### Statistics and Information Office | Statistical Analyst Havana, Cuba | September 2015 - October 2021

- Reproduced in R the algorithm to develop the Oxford Poverty methodology for measuring multidimensional poverty, and collaborated with multidisciplinary teams to integrate statistical analyses.
- Utilized tools like R and Python for statistical modeling and data cleansing, contributing to the publication of 2 research papers [\[1\]](#) [\[2\]](#).
- Designed questionnaires and implemented sampling strategies for household surveys.
- Employed data imputation, outlier detection, and consistency form rules to ensure data quality.
- Applied dimensionality reduction techniques such as PCA (Principal Component Analysis) and Factor Analysis.

## EDUCATION

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### St. Clair College

Post-graduation degree in Data Analytics for Business

GPA: 4.0 Faculty Academic Award

Windsor, Canada

May 2022 - August 2023

### University of Havana

Bachelor's degree in Mathematics

GPA: 3.2

Havana, Cuba

September 2011 - July 2015

## PROJECTS

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### Recycling Collection Service | [Read More](#)

*Python, Plotly, Pandas, PostgreSQL, Roboflow*

- Applied image processing techniques to detect recycling objects such as cans, glass bottles, and plastic bottles from user-uploaded images. It then leverages geolocation data extracted from these images, storing the details in a PostgreSQL database.
- The app also presents recycling requests on an interactive map, providing valuable insights into waste sorting patterns and enhancing recycling initiatives.

### Exploring EV population in Washington | [Read More](#)

*tableau*

- Created a tableau story to explore the growth rate of EV cars using dashboards. Identified the best-selling EV manufacturers and models over the years. Used Map, Area, Treemap, and Spyder Charts.

### Computer Vision for Autonomous Vehicles Challenge | [Read More](#)

*tensorflow, pandas, matplotlib*

- Train and evaluate several CNN architectures including VGG16 and ResNetV2 to classify traffic sign images. I added to the challenge database more than 300 traffic images using Google Maps which was key to winning the challenge with a 96% of accuracy.
- 1st Place Deep Learning, and Computer Vision for Autonomous Vehicles (Avs) 2023 Future Mobility Challenge. (Prize \$500)

## SKILLS

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Programming:

Python, R, SQL

Libraries/Frameworks:

Numpy, Pandas, Matplotlib, TensorFlow, Scikit-Learn, ggplot, tidyverse, tidy-models, shiny, R Markdown

Tools / Platforms:

Microsoft Excel, Tableau, Power BI, Power Automate

## CERTIFICATIONS

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- Career Essentials in Data Analysis by Microsoft and LinkedIn [Show credential](#)
- Datacamp track Data Analyst in SQL - [Show credential](#)
- Datacamp track Data Analyst with R - [Show credential](#)