Cristóbal Estrada Salinas

+52-962-699-4109 | essal.cristobal@gmail.com | LinkedIn | GitHub

Education

Tecnológico de Monterrey Jalisco, MX

B.S. Data Science and Mathematics - GPA: 91.0/100 *Aug. 2022 – Current (exp. June 2026)*

- **Relevant Courses:** Data Science Analysis, Modeled Learning with AI, Neural Networks Design and Deep Learning

Projects

Infrastructure, Regional Economic Growth and Poverty Analysis | *Python, Stata, PCA* Oct 2023

- Analyzed the relationship between infrastructure, regional economic growth, and poverty in Mexico to assess the influence of infrastructure development on socio-economic improvements.
- Utilized Principal Component Analysis (PCA) to develop an infrastructure index based on key variables, identifying regional disparities and evaluating its association with poverty indicators.
- Employed statistical software Stata for data analysis, including PCA and regression modeling.
- Implemented linear regression models to estimate the impact of infrastructure on per capita GDP and poverty rates, analyzing the relationships between these factors.

Children Anemia Level Predictor Using Classification Methods Nov 2023

| *Python, K-Nearest-Neighbors, Support Vector Classification, Random Forest Classifier*

- Developed and compared three machine learning models (SVC, KNN, and Random Forest) to predictanemia levels in children based on socio-economic and health data.
- Utilized Python and the scikit-learn library to implement, train, and evaluate the models
- Conducted exploratory data analysis to understand relationships within the dataset and identify potential risk factors for anemia.
- Achieved a high prediction accuracy of 95% with the Random Forest model, demonstrating the effectiveness of machine learning for identifying anemia risk in children.

Cardiac Arrest Predictor Using Non-Supervised Learning Nov 2023

| *Python, KMeans Clustering, Mean-Shift Clustering*

- Explored the use of unsupervised learning methods (K-means and Mean-Shift) to identify potential heart attack risk clusters within a dataset of patient characteristics.
- Employed Python and the scikit-learn library for data preprocessing, clustering, and visualization.
- Evaluated the effectiveness of these methods for detecting patterns and subgroups within the dataset, demonstrating the potential of unsupervised learning for healthcare applications.
- Successfully identified two distinct clusters based on age, maximum heart rate, and ST depression, suggesting potential for further investigation into these groupings.

Extra Curricular Skills

TOEFL IBT Aug 2024

Tecnológico de Monterrey *Jalisco, MX*

IASSC Certified Lean Six Sigma Yellow Belt May 2023

Lean Six Sigma

- Foundational Knowledge: A Lean Six Sigma Yellow Belt is well versed in the foundational elements of the Lean Six Sigma Methodology, understanding the elementary aspects and principles involved.
- Project Involvement: They are capable of leading limited improvement projects and serve as team members in more complex projects, supporting Certified Green Belts or Black Belts, usually in a part-time capacity.
- Competence in Key Phases: They possess competence in the phases of Define, Measure, and Control (DMC) and understand how to implement, perform, interpret, and apply Lean Six Sigma techniques in a skilled, supportive context.

Technical Skills

Languages: Python, C++, R
Developer Tools: Git, Jupyter Notebook, VS Code, Visual Studio, PyCharm, Spyder, R Studio
Libraries: Pandas, NumPy, Scikitlearn, Simpleai, SciPy, Pytest