- J U L I A N   M I R A N D A -

Machine Learning Engineer

Laredo, Texas, 78043 • Miranda.V.Julian@gmail.com • https://jvmiranda.com

Machine Learning Summary

- Machine Learning Engineer with 3+ years experience designing and developing a range of predictive models.
- Forecasted residential property values utilizing Random Forest Regression with Hyperparameter Optimization resulting in an accuracy of 86.6%.
- Determined sentiment of COVID-19 twitter posts using Multinomial Naïve Bayes Classifier achieving an accuracy of 66.8%.

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

Texas A&M International University   06/2022 – 08/2023

- Utilized a diverse range of computer languages to enhance and optimize the programs' performance, with an emphasis on efficiency, yielding an error of 4.75%.
- Support from the National Science Foundation (NSF-DMS-2213274): "LEAPS-MPS: Fast and Efficient Novel Algorithms for MHD Flow Ensembles" (2022-2023).
- Developed two algorithms for improved magnetohydrodynamic flow simulation, applicable in areas like artificial hearts and MHD propulsion.

Undergraduate Research Assistant

Texas A&M International University   09/2021 – 06/2022

- Applied college acquired modeling concepts, such as random forests, enhancing the simulations accuracy.
- Employed a reusable preconditioner across all realizations, substantially augmenting the time complexity.
- Commenced research on "A High Order Efficient Grad-Div Stabilized Algorithm for Parameterized Magnetohydrodynamic Flow Ensembles Simulation".

EDUCATION

Master of Science in Applied and Computational Mathematics

Texas A&M International University   06/2022 – 07/2023

- *magna cum laude* (Cumulative GPA: 3.8)
- Thesis: "Two Novel Efficient Algorithms for Parameterized Magnetohydrodynamic Flow Ensemble Simulation."
- Predicted heating and cooling loads in residential buildings by utilizing kNN receiving an error of 5±2%.
- Relevant courses: Machine Learning, Mathematical Modeling, and Statistical Analysis.

Bachelor of Science in Mathematics • Minor in Applied Physics

Texas A&M International University   08/2017 – 05/2022

- *cum laude* (Major GPA: 4.0)
- Honor Roll for 3 consecutive years (2020 – 2022).
- Recipient of the Louis Stokes Alliance for Minority Participation (LSAMP) STEM Undergraduate Fellowship.
- Relevant coursework: Clustering Models, Predictive Modeling, and Unit Testing.

SKILLS

• Machine Learning • Algorithms • Statistics • Data Preparation • Model Selection • NLP
• Software Development • Data Science • Artificial Intelligence • Data Analysis
• Python • C++ • MATLAB • SQL
• Scikit-learn • TensorFlow • PyTorch