

Maria Diaz

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Education

California State Polytechnic University, Pomona, May 2020

Master of Science in Applied Mathematics

- Member, California Mathematics Council

University of California Riverside, Riverside, June 2018

Bachelor of Science in Applied Mathematics

- Dean's Honor List

Academic Projects

Mathematical Model of Language Preservation, Master's Thesis, Fall 2019 – Spring 2020

- Created a language preservation model for a community with a bilingual population and two monolingual populations. Analyzed model performance using nonlinear systems of differential equations and MATLAB. Submitted for publication.

Data Science Project, Statistical Consulting, Spring 2020

- Drove innovation leveraging Data Science and Machine Learning algorithms such as, logistic regression tree and random forest in Python to experiment with and establish new ways of driving customer engagement by leveraging data

Neural Network (Artificial Intelligence), Mathematical Programming, Spring 2019

- Engineered a pattern recognition neural network in MATLAB that classified wines by winery based on its chemical characteristics, and was then generalized to accurately classify wines that were not used to design the solution

Machine Learning Algorithm, Applied Regression Analysis, Spring 2019

- Composed multiple statistical regression models and algorithms like KNN, Splines, and Kernels in R to decipher the magnitude of the long-term ozone trend and the variables that effect the ozone layer the most

Experience

Associate Data Analyst, Sheikh Shoes, Ontario, CA, July 2018 - Present

- Strengthen our reporting and manage project timelines to address merchandising, marketing, and finance questions
- Transform Excel reports into Python Notebooks using Pandas to increase reporting efficiency by 75%
- Effectively communicate with external clients and collaborate with internal teams to deliver solutions in a timely fashion

Graduate Teaching Associate, CPP Mathematics and Statistics, Pomona, CA, January 2019 - May 2020

- Responsible for teaching Trigonometry to 31 undergraduates resulting in 70% of students passing with a B average or better
- Communicate and explain mathematical concepts while facilitating discussions tying back to examples within the workforce
- Provide mentorship and feedback for students throughout the semester and serve as a link between students and faculty

Research Intern, UCR Career Center, Riverside, CA, March 2018 - June 2018

- Drove innovation and researched opportunities that would improve the website to help transform student experiences
- Influenced large matrixed teams to develop analysis and reporting focused on student performance and engagement
- Collected data that focused on improving the resources available to the increasing number of students pursuing a PhD

Research Assistant, UCR Mathematics Department, Riverside, CA, August 2017 - June 2018

- Programmed an algorithm in Python that dealt with effective divisors which is extensively studied in algebraic geometry
- Interpreted and scrutinized large data sets in order to develop a system that can find a correlation between data points
- Collaborated with advisor weekly to test data hypotheses and discuss future implementations as well as project goals

Skills and Abilities

- Data Science Competencies: Research, Machine Learning, Data Analytics, Data Visualization, ANOVA, T-test
- Programming Languages: R, Python (TensorFlow), LaTeX, C++, MATLAB, SQL
- Related Coursework: Computer Science, Machine Learning, Statistical Consulting, Mathematical Programming
- Computer: Microsoft Office Suite Certified, Photoshop, Google Drive, Canva (graphic design), WordPress
- Certification: Web Development Certification using JavaScript (In Progress)