Jorge Tadeo

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Work Experience:

Student Assistant
June 2019 - Present
The Department of Health Care Services, OC Web Team, Sacramento, CA
Finances and Administers a number of individual health care service delivery programs, including Medi-Cal, which provides health care services to low-income people.
- Maintained and proofread the DHCS website by fixing broken links, fixing spelling errors.
- Remediated ordinary PDFs using equidox to create screen readable PDFs.
- Collaborated as part of a team to finish larger PDF documents in order to meet deadlines.

Education:

Bachelor of Science, Computer Science
California State Sacramento   May 2020
- Minor in Mathematics

Projects:

Cafe Database (www.cafedb.xyz)
A database for a small business cafe store where customers and customer orders are tracked.
- Designed database from scratch from EER to Relational model into mysql code.
- Strengthened database security by using sanitization and prepared statements to prevent sql injection.
- Implemented an active database by creating triggers which would update other tables and check for correctness.
- Built frontend using HTML, CSS and used backend code to register new customers and their orders in PHP.

Binary Classification AI model
A machine learning neural network that predicts how much a person makes based on education, marital status, origin of birth, race, and job.
- Cleaned and prepared a large data set with python and pandas library.
- Integrated gradient descent on the training sample then ran it on the actual data to make predictions.
- Included analysis of the model using upscale and downscale data techniques in order to see performance in each case.

Univariate Linear Regression AI model
A model that will predict how much a food truck would make in profit based on the number of population and its location.
- Program was prototyped using Octave similar to Matlab but open source.
- Implemented cost function from scratch in order to understand the model.
- Implemented gradient descent from the ground up and used to fit the best parameters.

Queens Chess Board Problem
A model that uses an evolutionary algorithm to determine what position in a chess board will result in the lowest amount of conflicts.
- The model was implemented in two different ways using python in order to compare results.
- Evolutionary algorithm which would increase the cost of a result that would create a lot of conflicts preventing it from making it to the next generation.