NICO A. ESPINOSA DICE
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EDUCATION

Harvey Mudd College, Claremont, CA (Major GPA: 3.90) Expected May 2022
B.S., Mathematics and Computer Science; Humanities Concentration in Philosophy

RELEVANT COURSEWORK

Completed: Mathematics of Big Data 1, Data Structures and Program Development, Computability and Logic, Abstract Algebra 1, Financial Markets and Modeling, Differential Equations / Linear Algebra 2, Multivariable Calculus
Fall 2020: Artificial Intelligence, Algorithms, Mathematical Analysis, Number Theory and Cryptography

SKILLS

Programming Languages: Python (proficient), C++ (proficient), Java (proficient), C# (proficient), Bash (familiar)
Models: RNN, HMM, SVM, Random Forest, KNN, Logistic Regression, Naive Bayes, Bayesian Learning
Software: TensorFlow, Keras, Scikit-learn, PyTorch, Pandas, NumPy, CherryPy

RESEARCH EXPERIENCE

AMISTAD Lab, Harvey Mudd College—*Team Lead* May 2020 - Present

- Currently developing a mathematical framework of abductive reasoning for use in machine learning applications.

TECHNICAL EXPERIENCE

Viasat, Inc.—*Software Engineer Intern* May 2019 - August 2019
Intern Project: Built and delivered a heads-up display on Microsoft HoloLens that improves soldier situational awareness.

- Built REST API using CherryPy Python Library to enable communication between HoloLens and Link 16 radio network.
- Developed a global runtime manager in C# to handle distribution of data into assets (map, compass, and radar), allowing for live updating of heads-up display.
- Presented by Viasat at the Association of the United States Army Conference in October, 2019.

General Assembly: Data Science Course—*Student* June 2017 - August 2017

- Built random forest regression model in Python to predict the final sale prices of Iowa houses with over 90% accuracy.
- Presented the model's results to General Assembly faculty and students.

PROJECTS

Automated Trading System—*Personal Project* January 2019 - August 2019

- Built a recurrent neural network with long short-term memory architecture using TensorFlow to predict changes in stock price based upon market history.
- Automated trading of stock using Alpaca API, Bash scripting, and the neural network's predictions to create a net-positive automated trading system.

LEADERSHIP AND VOLUNTEER EXPERIENCE

Honor Board, Harvey Mudd College—*Judiciary Board Chair* October 2018 - Present

- Lead Harvey Mudd College's Honor Board, responsible for upholding Honor Code.
- Chair hearings regarding Honor Code violations and mediate settlements between students and faculty.

Society of Latinx in STEM, Harvey Mudd College—*Public Outreach Director* September 2018 - Present

- Lead biweekly STEM tutoring sessions for high school students through Uncommon Good and in partnership with Harvey Mudd's Society of Latinx in STEM.

AWARDS AND ACHIEVEMENTS

Harvey S. Mudd Merit Award, Harvey Mudd College, 2018 - 2020
Awarded $10,000 scholarship for "superior academic achievement and ability to contribute to the College community."
Dr. Peter R. Griel Character Award, Montclair Kimberley Academy, 2018
Awarded to 1 person in senior class (130 students) based on "personal character" and receives $2,500.