

NICO A. ESPINOSA DICE
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Claremont, CA 91711 || Montclair, NJ 07042

EDUCATION

Harvey Mudd College, Claremont, CA (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, Differential Equations / Linear Algebra 2, Multivariable Calculus, Financial Markets and Modeling

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: Recurrent Neural Networks, Hidden Markov Models, Support Vector Machines, Random Forest, Naive Bayes

Software: TensorFlow, Keras, Scikit-learn, PyTorch, Pandas, NumPy, CherryPy

RESEARCH EXPERIENCE

AMISTAD Lab, Harvey Mudd College—*Machine Learning Researcher, Team Lead*

May 2020 - Present

- Currently developing a mathematical theory of abductive logical 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, 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 a random forest regression model in Python to predict the final sale prices of Iowa houses with over 90% accuracy.

PROJECTS

Biometric Authentication of Smartphone Users—*Final Project, Math189R*

February 2020 - May 2020

- Built a support vector machine model to authenticate smartphone users with 85% accuracy using biometric data.
- Empirically examined the performance of varying kernel functions, including polynomial, sigmoid and radial basis function.

LEADERSHIP AND VOLUNTEER EXPERIENCE

Honor Board, Harvey Mudd College—*Judiciary Board Chair (2020)*

October 2018 - Present

- Lead Harvey Mudd College's Honor Board, responsible for upholding the 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.