

DAVID B. GOMEZ

Data Scientist / Machine Learning Engineer

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OBJECTIVE

Seeking full-time position as Data Scientist / Machine Learning Engineer.

EDUCATION

MS Computer Science
Specialization: Machine Learning
Georgia Institute of Technology

📅 2022 - 2024
📍 Atlanta, GA

Relevant courses

- Deep Learning
- Machine Learning
- Artificial Intelligence
- Social Computing
- Data and Visual and Analytics

MS Aerospace Engineering
Specialization: Electric Propulsion
Georgia Institute of Technology

📅 2018 - 2020
📍 Atlanta, GA

Awards

- NASA Space Technology Fellowship

Relevant courses

- Accident Causation and System Safety

BS Aerospace Engineering
Georgia Institute of Technology

📅 2015 - 2018
📍 Atlanta, GA

Awards

- Outstanding Undergraduate Researcher

SKILLS

Programming / Tools

- Python: NumPy, Pandas, Seaborn, Scikit-learn, Keras, Tensorflow, PyTorch
- Hugging Face
- GitHub
- MATLAB
- LaTeX
- STATA / R
- LabVIEW

RELEVANT PROJECTS

Patterns of Suicide Disclosures on Twitter

Graduate Researcher | Social Dynamics and Well-Being Lab

📅 Fall 2023

- Combined machine learning, deep learning, and natural language processing techniques and a sample of 1500 Twitter timelines to identify temporal-linguistic response patterns to suicide-related disclosures on Twitter.
- Built an array of language-based text-classifiers ranging from bi-gram logistic models to pre-trained transformers from HuggingFace to preempt which response type a user would exhibit using historical data with a F1-score of 0.64.
- Collected data using Twitter's APIs, extracted linguistic features via LIWC lexicon, and developed models in Python using Sci-Kit Learn, Keras, and Hugging Face.

Language Characteristics of Mental Health Sub-Reddits

Group Project Leader | Deep Learning Course Project

📅 Fall 2023

- Utilized natural language processing and deep learning interpretability techniques to identify language characteristics that differentiate mental-health forums on Reddit.
- Collected data using Reddit's Pushshift API and developed models in Python using Keras, Tensorflow, and Hugging Face.

Improving State-Level Gun Ownership Proxy

Graduate Researcher | Space Systems Design Lab

📅 Fall 2020

- Utilized linear regression and deep neural networks to develop an improved proxy for gun ownership for use in firearm-related research that increased the accuracy of the state-of-the-art proxy from $R^2 = 82\%$ to 95% .
- Collected data from CDC BRFSS and WONDER databases and conducted analyses in STATA and Python (PyTorch).

Challenging the Inevitability of Suicide

Group Project Leader | Social Computing Course Project

📅 Fall 2019

- Utilized statistical learning techniques to argue that methods to reduce firearm suicide rates (gun laws) do not exacerbate suicides by other means.
- Collected suicide data from CDC WONDER APIs and conducted analyses in STATA.

WORK EXPERIENCE

Research & Development Engineer

Busek Space Propulsion and Systems

📅 August 2020 - August 2021

📍 Natick, MA

- Performed tests, experiments, and data analyses for the qualification of electric propulsion devices.
- Built LabVIEW applications to automate the acquisition of Hall thruster magnetic field profiles and oscilloscope measurements that reduced acquisition time by 25%.
- Developed a standardized uncertainty analysis procedure in MATLAB for electric propulsion thrust stands.

Electric Propulsion Intern (x3)

NASA Jet Propulsion Laboratory

📅 Summers 2018, 2019, 2020

📍 Pasadena, CA

- [2020] Developed a comprehensive uncertainty analysis procedure for electric propulsion thrust stands using linear regression and inverse prediction intervals.
- [2018, 2019] Built a custom LabVIEW application for electric thruster testing that synchronized the control and data acquisition of 20 devices and over 200 channels, and improved the hardware response time and sampling rate by 1 and 3 orders of magnitude, respectively.

