David Benjamin Gomez

Machine Learning Engineer

dbgomez94@gmail.com Boston, MA **https://dbgomez94.github.io/**

Former aerospace engineer turned machine learning engineer (MLE) graduating Dec 2024. Seeking a role as a MLE for social good.

EDUCATION

Georgia Institute of Technology - Master's of Science, Computer Science

August 2022 - current, GPA: 3.8/4.0 Atlanta, GA

Deep Learning (A); Machine Learning (A); Artificial Intelligence (A); Social Computing (A); Data and Visual Analytics (A)

Georgia Institute of Technology - Master's of Science, Aerospace Engineering

August 2018 - May 2020, GPA: 3.7/4.0 Atlanta, GA

NASA Space Technology Fellowship

Accident Causation & System Safety (A); Rocket Propulsion (A); Electric Propulsion (A)

Georgia Institute of Technology - Bachelor's of Science, Aerospace Engineering

August 2015 - December 2018, GPA: 3.6/4.0 Atlanta, GA

Outstanding Undergraduate Researcher

EXPERIENCE

Social Dynamics and Well-Being Laboratory - Graduate Research Assistant

August 2022 - May 2024 Atlanta, GA

- Applied the tools of machine learning to answer questions at the intersection of social media and mental health.
- Combined NLP and timeseries clustering on Twitter/X data to identify common response patterns to suicide disclosures.
- Built a transformer-based deep learning classifier to identify linguistic features that differentiate mental health forums on Reddit.
- Combined NLP and linear regression on Twitter/X data to find evidence of American desensitization to public mass shootings.

Space Systems Design Laboratory - Graduate Research Assistant

August 2021 - May 2022 Atlanta, GA

- Conducted reliability analyses of CubeSat subsystems via non-parametric Kaplan-Meier curves and time-to-failure distributions.
- Co-authored a publication on Monte-Carlo simulations of the Net Present Value of High-Throughput Satellites.

Busek Space Propulsion and Systems - Research & Development Engineer

August 2020 - August 2021 Natick, MA

- Supported laboratory testing and data analyses for the qualification of electric propulsion devices for spaceflight.
- Built LabVIEW applications to automate the acquisition of Hall thruster magnetic field profiles and plasma diagnostics.

High-Power Electric Propulsion Laboratory - Graduate Research Assistant

August 2018 - May 2020 Atlanta, GA

- Conducted a one-dimensional numerical simulation of Hall-effect thrusters by evolving kinetic transport equations.
- Built a propellant delivery system for Hall-effect thrusters testing and developed an associated LabVIEW control interface.

NASA Jet Propulsion Laboratory - Electric Propulsion Graduate Intern

Summer 2020 Pasadena, CA

- Developed a standardized uncertainty analysis procedure for electric propulsion thrust stands via inverse prediction intervals.

NASA Jet Propulsion Laboratory - Electric Propulsion Intern (x2)

Summer 2018, 2019 Pasadena, CA

- 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.

SKILLS

Languages

Python; MATLAB; STATA; R; LabVIEW; LaTeX

Frameworks

Numpy; Pandas; Seaborn; Scikit-Learn; Keras; TensorFlow; PyTorch; Hugging Face; GitHub