Luke Kaufman

954-663-0847 | lukekaufman@outlook.com
www.linkedin.com/in/luke-kaufman | https://lukekaufman.github.io

Education

University of Florida, *Cum Laude*

- Bachelor of Science in Aerospace Engineering
- Honors Program | 3.95/4.0 GPA

Certifications

- Microsoft Azure AI Fundamentals: AI-900 Certificate
- CS50 Certificate in Artificial Intelligence and Machine Learning in Python by Edx
- Certified SOLIDWORKS Associate in Mechanical design (CSWA)

Relevant Experience

University of Florida Election Data Science Lab, *Undergraduate Analyst* Aug 2022-May 2023

- Used Pandas Python package to support graduate research by automating the process of matching election observer names with their voterfile records in North Carolina counties.
- Extracted file metadata from Harvard Dataverse's API in order to establish a local data repository.

Autonomous Vehicles and Controls Lab , *Undergraduate Engineer* Jan 2023 -May 2023

- Led a team of three in developing a Python-based autonomous vehicle capable of following a predetermined GPS path.
- Implemented Robot Operating System (ROS) within a Linux virtual machine to interface with a remote vehicle.
- Developed and fine-tuned a PID controller, utilizing LiDAR input to avoid obstacles and round corners autonomously.

Pratt & Whitney, *Structural Engineering Intern* May 2022 -Aug 2022

- Conducted a modal analysis study in Ansys to address the impact of notches on stress concentration factor across different bending modes for aircraft fan blades.
- Collaborated with the Advanced Engine Program to analyze crack propagation direction, both deterministically and probabilistically.

Projects

- Created an R-based analysis of state campaign-finance records determining the prevalence of out-of-state donors for New York State Senate seat turnovers by the Republican party in the 2022 midterm (2023).
- Implemented a Tic Tac Toe AI using Minimax Algorithm with Alpha-Beta pruning (2023).
- Designed a solid visualization program capable of importing and graphically rendering 3D CAD files, leveraging a boundary-representation data structure. The program offered a dynamic and informative representation of complex CAD data.

Relevant Skills

- Engineering Softwares: MATLAB, Tableau, Solidworks, AutoCAD, Ansys
- Programming Languages: Java, Python, SQL, R
- Other: Linux Environment, Robot Operating System (ROS), Microsoft Office