Project 2: Bottle Rocket Modeling

Due: 11:59 pm, ***Friday, Dec. 4th, 2020***

Presentation – Submit to Gradescope

Submit a presentation explaining and analyzing the results of your code as a pdf to Gradescope. The following is a rough outline of what to include in your presentation. Remember to stick to a slide limit of **20 Slides.**

Introduction	Introduce the problem including any assumptions and the formulation of the problem used in your code.
Code Flow Chart	Create a code flow chart that highlights the algorithm used in the code. This can be 'higher level' than the flowchart from Project 1 in order to fit in a slide.
Results – Verification Case	Show that you were able to match the verification case. Include plots of the trajectory and thrust profile.
Results – Test Case	Show that you varied each parameter that you have control over (coefficient of drag, amount of water, rocket air pressure, and launch angle) independently to analyze its effect on the trajectory. Include graphs of the thrust profile for each phase as well as the final trajectory using your chosen values. Be sure to show that your rocket lands within the targeted range.
Discussion/Analysis	Analyze rocket performance Discuss tradeoffs between the parameters in order to achieve the desired rocket performance
Conclusion	1 slide to summarize results and the project itself
Backup Slides	Include any backup slides as necessary. These should include any slides you would use to further explain certain points or that you would not use when actually giving the presentation.
References	AIAA Format
Style and Clarity	Follow what was taught regarding good presentations. Keep your slides clear and ensure that your text is visible on the background of the slides.

Include any other figures or data as seen appropriate to convey your results. Make sure your use of the 10-step method is clear in the slides. You do not need to include a list of the steps, rather

include how you used it under the appropriate slides. Do not submit your code as a pdf in Gradescope or include it in your presentation.

Code – Submit to Canvas

Submit a zip file with your code, including all function needed for the code to run, to Canvas by the deadline. Don't forget to include a code header with your name, the purpose of the code, any inputs and outputs used for functions, student ID, date created, and date modified. Comment your code well.

Make sure to use the naming convention **LastNameFirstName_Project2Code** for the zip file