Satellite Collision Avoidance

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Abstract: This paper presents the work I did in satellite collision avoidance. the objectives were to plot all current satellites in their orbits, to conduct a near neighbor analysis of all satellites that were within 100km of each other, and to conduct an analysis of how often certain satellites came within 100km. This was done by using matplotlib to plot the satellites on the plot approx 25,000 satellites. using kdtrees the nearest neighbor analysis was done. The results that I got were that a good number of them were Starlink satellites which closely follow each other in a line. the rest are just random encounters or satellite debris that got too close. The significance of this is

Keywords: Satellites, keyword2, keyword3, etc.

1 Introduction

2 Background

3 Methods

The first step in this process was to create a 3d plot of all the satellites curently in orbit. To do this I used matplotlib to

4 Data Collection

Place images in this section.

5 Conclusion

Reference to the figure should follow the format "Fig. **??**". Use "Figure **??**" instead if beginning of sentence.

Acknowledgement

Funding supports should be acknowledged in this section.

6 In-text citation

References should be arranged by the order in which they appear in the text. The example LaTeX command for different in-text citation (please see the source code):

1. Matplotlib
2. Numpy
3. Scipy
4. [**kusoncum2021heuristics**]