Wildfire Simulation
Scientific Visualization Project Report

Johannes Kurz, Yingyan Xu, Yitong Xia, Stuart Heeb

May 3, 2023

1 Introduction

Introduce into the topic. Talk about the application. Why is it relevant?

Stuart:

This analysis is the task of the 2022 SciVis Contest [1], which is dedicated to finding visualizations to better understand wildfires, in particular vorticity-driven lateral spread (VLS).

2 Data

Introduce the data. Who generated it (add references)? Is it simulated or measured? What does the data set contain? Classify your data: what kind of grids? what kinds of attributes (quantitative, ordinal, nominal)? is it scalar data, vector data?

Data is from [2].

3 Goals

Which goals did you set for your project and which ones did you achieve? Add a time line.

4 Visualizations

Show images of your interactive visualization system and describe the story of your visualizations. Also describe your data preprocessing if applicable.

4.1 Part 1

What aspect of the data do you concentrate on? What do you want to show? Justify your choice of the visualization method! How did you implement the visualization? Describe what we see in the visualization. Is the method interactive? What parameters does the method have? What insights did you get from the visualization?

4.2 Part 2

Same as above.

5 Contributions

5.1 Johannes Kurz

5.2 Yingyan Xu

5.3 Yitong Xia

5.4 Stuart Heeb

6 Discussion

6.1 Limitations

What are the limitations of your approach / your implementation?

6.2 Future Work

What would you like to add or study further, if you had more time?

References

[1] Los Alamos National Laboratory. IEEE 2022 SciVis Contest. https://www.lanl.gov/projects/sciviscontest2022/, 2022. [Online; accessed 3-May-2023].

[2] Los Alamos National Laboratory. IEEE 2022 SciVis Contest Data. https://oceans11.lanl.gov/firetec/, 2022. [Online; accessed 3-May-2023].