

Wildfires Detection Using UAV Images

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Abstract—In this paper it will be explored the idea if it's possible to improve the accuracy of the FLAME model, capable of fire detection; by using modern architectures and adding more diversity to the dataset by adding new images and augmenting the current ones.

This resulted in not yet achieving the desired accuracy, but showing potential, considering the possible reduce of computational resources and the overall small amount of parameters of the trained model

Index Terms—CNN; Deep Learning; Image Recognition; Image Classification; Wildfires

1 Introduction

First word [1]

2 Background / Literature Review

3 Methods

4 Results

5 Conclusion

References

- [1] Y. Malhi, L. E. Aragão, D. Galbraith, C. Huntingford, R. Fisher, P. Zelazowski, S. Sitch, C. McSweeney, and P. Meir, "Exploring the likelihood and mechanism of a climate-change-induced dieback of the amazon rainforest," *Proceedings of the National Academy of Sciences*, vol. 106, no. 49, pp. 20 610–20 615, 2009.

6 Plan

- Week 7 (March 1st-7th). Implement fine-tuning of both models to attempt to improve the accuracy
- Week 8 (8th-14th). Implement initially implementation of RepVGG
- Week 9 (15th-21st). Fine-tune RepVGG
- Week 10 (22nd-28th). Investigate new ways to improve the score (probably using new datasets)
- Week 11 and 12 (March 29th - April 12th). Implement techniques researched prior week
- Week 13 (13th - 25th). Write research paper