Navigating Data Augmentations for Segmentation

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***Abstract*—This is a placeholder abstract which will describe the premise of our paper**

***Index Terms*—data augmentation, nuclei segmentation, deep learning, U-Net**

I. Introduction

THIS is the beginning of the introduction. Here we will motivate why we want to explore the use of data augmentation, particularly for images, in the field of machine learning.

Furthermore we will introduce nuclei segmentation as the task for which we will be testing data augmentations. We will explain why nuclei segmentation is an important problem in general, why we chose this task to test data augmentation, why data augmentation is important for segmentation problems etc.

II. Background

In this section we will describe the field and existing work done for nuclei segmentation

III. Methods

A. Dataset

Here we will describe the dataset we chose to use. Test TRAIN split. Downsampling etc.

B. Models

Here we will describe the different models that we tried. We could give their baseline results without data aug here as well.

C. Experimental Design

Here we will explain which models we decided to run data aug experiments on and why. We will also describe the different data aug experiments we chose to Run

1) Experiment 1: Just realized that subsubsections in this template show up as more of a list than a section

2) Experiment 2: We will need to keep the experiment descriptions brief then

3) Experiment 3: Might need to reformat this section bc not sure how i feel about the subsubsections

IV. Results

A. Results from Experiment 1

B. Results from Experiment 2

C. Results from Experiment 3

V. Discussion

I've always thought of the discussion as sort of a conclusion of for the results section

VI. Conclusion

Briefly summaraize the keypoints from the paper

Awknowledgments

Thank the course instructors as well as PI's that took the time to give lectures/presentationss

Appendix

Just in case we need one. If we have more than 1 distinct idea and or figure that needs to go here, then it should be changed to `\appendices`, and we will create sub appendices

References

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