Formatting Instructions For NeurIPS 2023

Anonymous Author(s)
Affiliation
Address
email

Abstract

The abstract paragraph should be indented ½ inch (3 picas) on both the left- and right-hand margins. Use 10 point type, with a vertical spacing (leading) of 11 points. The word **Abstract** must be centered, bold, and in point size 12. Two line spaces precede the abstract. The abstract must be limited to one paragraph.

A short description of your goals, task, model, and (for the final report) results. The abstract should make the motivations and the scope of your project clear so that readers can decide whether they are interested in reading your work.

1 Introduction

A description of the motivation behind your work, why the task you chose is interesting/important, and a summary of your (proposed) approach. The problem that you want to solve should be clearly stated in the introduction: especially the input and output of your model and the format of the input and output. This section should also make it clear why your deep learning approach is reasonable for this problem.

2 Background and related work

A summary of the background material that students of CSC413 would not already be familiar with. A description of related work done in the area, and how your approach compares with theirs. If your project builds on previous work, clearly distinguish what they did from what your new contribution is. Also, include a 1-2 sentence summary of other closely related papers. We realize you might not know about all related papers (or have time to carefully read all related papers), and that's OK for this project. Using bibtex is annoying at first, but Google Scholar can give you the bibtex entries.

3 Data

The dataset used in your model. Include any key exploratory figures that will help readers evaluate the difficulty of your problem and interpret the performance of your model.

https://www.kaggle.com/datasets/mathurinache/math-dataset

TODO: Find another dataset with proofs/numerical data

4 Model architecture

A description of your (proposed) model architecture. Please propose an architecture during the proposal phase, but it's okay to change your architecture. In the final report, this section should have enough details to reproduce the work, including all hyperparameters andXX 3training settings that you used.

Submitted to 37th Conference on Neural Information Processing Systems (NeurIPS 2023). Do not distribute.

Better with word problems? Architecture: PaLM, GPT4: http://research.google/blog/minerva-solving-quantitative-reasoning-problems-with-language-models/

We could also combine the two models: SympyGPT: Transformers for symbolic integration proofs: https://arxiv.org/html/2410.02666v1

Google PaLM2: https://arxiv.org/pdf/2204.02311

5 Model architecture figure

A figure that helps show the overall model or idea. The idea is to make your paper more accessible, especially to readers who are starting by skimming your paper. You must create a new figure, not just use someone else's, even with attribution. Be careful that all figure text are legible, and are approximately the same size as the main text.

6 Ethical considerations

Potential ethical issues posed by the use or misuse of your model. Your report should transparently communicate the known or anticipated consequences of building and using machine learning models on this task. https://neurips.cc/public/EthicsGuidelines

7 Work division

A description of how the work will be divided between the team members, and how the team members will be working together (e.g. meet every week Tuesday 4-5 pm).