

Applied Machine Learning

Disease Symptom Prediction

Louis Simon Spatscheck, Aikaterini Vasilopoulou,
Léandre Pablo Delphin Göblyös, Dominik Pastuszka Malek

Abstract

The abstract for your project goes here. The length of the abstract should be about 200 words. Tips for writing a good abstract can be found at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136027/>.

Link to *GitHub* repository containing the dataset and all code developed for this project:

Applied Machine Learning - Disease Symptom Prevention (GitHub)

1. Introduction

- Introduce Machine Learning and its applications in healthcare.
- Introduce the dataset and its relevance to the project + explain dataset with visuals
- Introduce the main goal of the project.
- Introduce the structure of the report.

[1]

2. Related Work

- Don't know if we need that section, any ideas ?

Method	Accuracy
Method 1	$70 \pm 3 \%$
Method 2	$76 \pm 3 \%$

Table 1: This is an example of a table.

3. Proposed Method

- Describe the transformations to the dataset you are using. One-Hot Encoding. Also trying other transformations (balancing) ?
- Describe the methods you are using (DT, RF, SVM, LR, NN). You can use a table to summarize the methods.
- Describe the evaluation metrics you are using (acc, confusion, ROC). You can use a table to summarize the metrics.

Email addresses: author1@student.sdu.dk, author2@student.sdu.dk, author3@student.sdu.dk, dpast24@student.sdu.dk



Figure 1: Example illustrating how to get BibTeX references from Google Scholar.

4. Experiments

- Describe Binary Classification experiments. Modelsetups and hyperparameter tuning (gridSearch)
- Describe Multi-class Classification on subset, which parameters are optimized. show parameter tuning? (gridSearch)
- Describe Multi-class Classification on full dataset, which parameters are optimized. show parameter tuning? (gridSearch)
- More Experiments?

4.1. Binary Classification

4.2. Multi-class Classification

5. Results and Discussion

- Describe the results of the experiments. You can use tables and figures to summarize the results.
- Discuss the results. What do they mean? How do they compare to other methods? What are the limitations?

6. Conclusions

- Summarize the main findings of the project.
- Discuss the implications of the findings. Is this suitable for real-world applications?
- Discuss the limitations of the project and future work.

7. Acknowledgements

8. Contributions

Describe the contributions of each team member who worked on this project.

References

- [1] A. Peimankar, S. J. Weddell, T. Jalal, A. C. Lapthorn, Evolutionary multi-objective fault diagnosis of power transformers, *Swarm and Evolutionary Computation* 36 (2017) 62–75.