

A Primer on Machine Learning for Physical Sciences

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Abstract. Machine Learning has shown substantial impact on Scientific Computing in recent years. The adaptation of ML techniques to deal with various research problems in Physical Science have gained ground as an alternative to the existing Numerical Schemes. In this paper, we would like to introduce the reader to a basic Neural Networks(NN) that can solve Ordinary Differential Equations and Partial Differential Equations. In Particular we choose First and Second Order equations to illustrate the proficiency of Neural Network over traditional numerical techniques. This paper will be helpful for any Graduate and Undergraduate students and also as an introductory material to any new researcher who wants to apply Machine Learning techniques to their problem of interest.

Keywords. keyword1, keyword2, keyword3 etc.

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1. Introduction

Section text here.

1.1 Subsection heading

Subsection text here.

2. A new Section

Some more text here.
An equation

$E = mc^2$ (1)

Table 1. Table fitting in a single column

one	two	three	four	five	six
1	2	3	4	5	6
aaa	bbbb	ccccc	dddd	eeeee	fffff

Sample table footnote

3. Conclusion

Conclusion here.

Appendix A. An appendix section

Text goes here.

$x = a + b + c$ (A.1)

Appendix B. Another appendix section

Text goes here.

$y^2 = ax + b + c$ (B.1)

Acknowledgement

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References

[1] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The L^AT_EX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.