Using Hybrid Machine Learning for Fundamental Stellar Parameter Inference

Sujay Shankar,[1] Michael Gully-Santiago,[1] and Caroline V. Morley[1]

[1]*Department of Astronomy, The University of Texas at Austin, Austin, TX 78712, USA*

ABSTRACT

Text

Keywords: Text

1. INTRODUCTION

Text

2. CLONING THE PHOENIX MODEL GRID

2.1. *Preprocessing with* `gollum`

Text

2.2. *Optimization with* `blase`

Text

2.3. *Voigt Component Compression*

Text

3. INTERPOLATING MANIFOLDS

3.1. *Maintaining Line Persistence*

Text

3.2. *Continuously Evaluable Partials*

Text

4. THE PHOENIX GENERATOR

4.1. *Generator Design*

Text

4.2. *Measuring Information Loss*

Text

5. BAYESIAN OPTIMIZATION

Text

6. INFERENCE TESTING

6.1. *Test Data*

Text

6.2. *Performance Results*

Text

7. DISCUSSION

Text

ACKNOWLEDGEMENTS

Text