Action Selection for Model Disambiguation

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***Abstract*— TODO**

I. INTRODUCTION

1) Learning algorithms need to choose between models that represent the data
2) While learning it is important to economically spend sampling resources to disambiguate which models

II. BACKGROUND

1) A^2 learner finds points where classifiers disagree.
2) UCB Improved uses bandit arms where their expected value overlaps
3) Lindly 1956 defined a measure of how much a sample improves the certainty.

III. MODEL SELECTION

1) Bayesian Information Criterion

$$x = \arg\max_{x' \in S} H\left(K|x'\right) - H\left(K\right) \tag{1}$$

Where K is the kernel and x' is a point in the support of the function to be learned, $f\left(x\right)$

A. Equations

The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled. Number equations consecutively. Equation numbers, within parentheses, are to position flush right, as in (1), using a right tab stop. To make your equations more compact, you may use the solidus (/), the exp function, or appropriate exponents. Italicize Roman symbols for quantities and variables, but not Greek symbols. Use a long dash rather than a hyphen for a minus sign. Punctuate equations with commas or periods when they are part of a sentence, as in

$$\alpha + \beta = \chi \tag{1}$$

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IV. EXPERIMENTS

1) Restrict range of functions to $[0, 1]$ (wlog)
2) Objective measure: Reconstruction error over the range finely sampled after the fact.
3) Initially start with a uniform prior over the models
4) Using Gaussian process regression [**?**] to represent the model selection
5) Control algorithms: Random and uniform sampling, max entropy sampling over
6) Stationary functions
7) Nonstationary functions

V. CONCLUSIONS

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

APPENDIX

Appendixes should appear before the acknowledgment.

ACKNOWLEDGMENT

The preferred spelling of the word acknowledgment in America is without an e after the g. Avoid the stilted expression, One of us (R. B. G.) thanks . . . Instead, try R. B. G. thanks. Put sponsor acknowledgments in the unnumbered footnote on the first page.

References are important to the reader; therefore, each citation must be complete and correct. If at all possible, references should be commonly available publications.

REFERENCES