Towards General Algorithms for Grammatical Inference^{*}

Alexander Clark

Department of Computer Science
Royal Holloway, University of London
`alexc@cs.rhul.ac.uk`

Abstract. Many algorithms for grammatical inference can be viewed as instances of a more general algorithm which maintains a set of primitive elements, which distributionally define sets of strings, and a set of features or tests that constrain various inference rules. Using this general framework, which we cast as a process of logical inference, we re-analyse Angluin's famous LSTAR algorithm and several recent algorithms for the inference of context-free grammars and multiple context-free grammars. Finally, to illustrate the advantages of this approach, we extend it to the inference of functional transductions from positive data only, and we present a new algorithm for the inference of finite state transducers.

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