# Speech Recognition Experiments with Perceptrons

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**Abstract:**

Artificial neural networks (ANNs) are capable of accurate recognition of simple speech vocabularies such as isolated

digits [1]. This paper

looks at two more difficult vocabularies, the alphabetic E-set and a set of polysyllabic words. The E-set is difficult

because

it contains weak discriminants and polysyllables are difficult because of timing variation. Polysyllabic word recognition is

aided by a time

pre-alignment technique based on dynamic pro(cid:173) gramming and E-set recognition is improved by focusing

attention. Recogni(cid:173) tion accuracies are better

than 98% for both vocabularies when implemented with a single layer perceptron.