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| **Author(s) Name:** | Shahriar Mahmud Kabir, Ahmed Al Mansur, and Muhibul Haque Bhuyan | | |
| **Contact Email(s):** | muhibulhb@aiub.edu | | |
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| **Abstract:** |  |
| Abstract— Automatic speech recognition (ASR) is the process by which a computer (or machine) identifies spoken words. It has widespread applications in data entry, and document preparation, telephony with command facility instead of pressing buttons, dictation applications such as commands and control, speech to text for the people with problems in hearing. Difficulties in ASR mainly depend on some characteristics such as, isolated or continuous speech, speaker-dependence and variability, vocabulary size, language models, and environmental noise. In this paper a vowel recognition system is proposed which can be efficiently used for digit recognition. In the testing phase, given an utterance of digit, the first task will be to estimate accurately the type and location of vowels and then identify the digit. In the proposed classification stage, a template matching will be employed. The proposed classifier will perform a comparison between the extracted features of the test sound and those stored of in the trained template using Euclidean distance. In comparison to probabilistic approaches of vowel recognition, such as the Hidden Markov Model (HMM), the proposed method will be computationally less expensive. Experiments will be carried out on natural sounds using MATLAB in order to compute the recognition accuracy. | |