



INDEX FINGER MOTION RECOGNITION USING SELF-ADVISE SUPPORT VECTOR MACHINE

¹Khairul Anam, ²Adel Al Jumaily, ³Yashar Maali

¹University of Jember, Indonesia

^{1,2,3}Centre for Health Technology, University of Technology Sydney

¹Email: Khairul.Anam@student.uts.edu.au

²Emails: Adel.Al-Jumaily@uts.edu.au

³Emails: Yashar.Maali@student.uts.edu.au

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Abstract- Because of the functionality of an index finger, the disability of its motion in the modern age can decrease the person's quality of life. As a part of rehabilitation therapy, the recognition of the index finger motion for rehabilitation purposes should be done properly. This paper proposes a novel recognition system of the index finger motion using a cutting-edge method and its improvements. The proposed system consists of combination of feature extraction method, a dimensionality reduction and well-known classifier, Support Vector Machine (SVM). An improvement of SVM, Self-advise SVM (SA-SVM), is tested to evaluate and compare its performance with the original one. The experimental result shows that SA-SVM improves the classification performance by on average 0.63 %.

Index terms: Support Vector Machine, Self-advise SVM, pattern recognition.