**Department of Information technology**

**National Institute of technology, Srinagar, J&K**

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**STUDENT’S DECLARATION**

We, hereby declare that the work, which is being presented in the project entitled **“ANALYSIS OF DIFFERENT ALGORITHMS USING MACHINE LEARNING FOR BIOMETRIC IDENTIFICATION”** in thepartial fulfillment of the requirement for the award of the degree Bachelor of Technology in Information Technology in the session 2018, is an authentic record of our work carried out under the supervision of **Ms. Insha Altaf,** Department of Information Technology, National Institute of Technology, Srinagar. The matter embodied in this project has not been submitted by us for the award of any other degree.

**Dated:**

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**ABSTRACT**

Biometric Identification is one of the most explored topics in recent years. It aims at reliable and robust identification of humans from their personal traits, mainly for security and authentication purposes, but also for identifying and tracking the users of smarter applications. Frequently considered modalities are fingerprint, face, iris, palmprint and voice, but there are many other possible biometrics, including gait, ear image, retina, DNA, and even behaviour. In the first step, an algorithm is used for extracting patterns and generating a database. In the second step, filtering and preprocessing are applied to images obtained in the previous step. In the third step, a collection of machine learning algorithms are trained using as input data the output obtained in the previous step. Finally, the classifiers are used for classify output. The obtained results shows the suitability of this approach for analyzing large collections of images involving biometric applications.

This report presents a survey of machine learning methods used for biometrics applications, and identifies relevant research issues. It focuses on three areas of interest: offline methods for biometric template construction and recognition, information fusion methods for integrating multiple biometrics to obtain robust results, and methods for dealing with temporal information. By introducing exemplary and influential machine learning approaches in the context of specific biometrics applications, it hopes to provide the means to create novel machine learning solutions to challenging biometrics problems.