

## **Abstract**

Fingerprints are the most widely used biometric techniques for personal identification and verification in the field of biometric authentications. In fact it is the most reliable and cheapest biometric user authentication that is presently available. Through various studies it has been observed that no two persons have the same fingerprints, hence they are unique for every individual. Fingerprint has two main features which are used for automatic identification and verification: *i*).global features i.e. singular points (ordinary points, cores, deltas and double cores) and ridges *ii*).local features i.e. minutiae sets (terminations, bifurcations, islands, crossovers and spurs etc).This project attempts to present an enhanced minutiae extraction approach from the skeletonized fingerprint image. It presents effective methods for fingerprint verification using data mining approach. Here it performs clustering on the minutiae points with the help of which a graph is generated which provides an index useful for verification process.

**Keywords:** Fingerprint, Minutiae, Clustering, Graph, Index.