**Person Vein Identification using CNN**

**ABSTRACT:**

Automated personal identification using vascular biometrics, such as from the finger vein images, is highly desirable as it helps to protect the personal privacy and anonymity in automated personal identification. The Convolutional Neural Network (CNN) has shown remarkable capability for learning biometric features that can offer robust and accurate matching. This paper introduces a new approach for the finger vein authentication using the CNN and supervised discrete hashing. We also systematically investigate comparative performance using several popular CNN architectures in other domains, i.e., Light CNN, VGG-16, Siamese and the CNN with Bayesian inference based matching. The experimental results are presented using a publicly available two-session finger-vein database. Most accurate performance is achieved by incorporating supervised discrete hashing from a CNN trained using the triplet-based loss function. The proposed approach not only achieves outperforming results over other considered CNN architecture available in the literature but also offers significantly reduced template size as compared with those over the other finger-vein images matching methods available in the literature.

**EXISTING SYSTEM :**

All existing biometric algorithms are dependent on humans hand crafted features whose prediction accuracy is not up to the mark.

**Disadvantages**

1. It takes more time
2. Less accuracy

**Proposed System:**

In propose work we are employing machine learning SVM algorithm and deep learning CNN algorithm and then evaluating both performance in terms of accuracy and confusion matrix.

**Advantages**

1.It takes less time

2.More prediction

**SYSTEM REQUIREMENT:**

**HARDWARE REQUIREMENTS:**

# Processor - I3(min)

* Speed - 1.1 GHz
* RAM - 4GB(min)
* Hard Disk - 500GB

**SOFTWARE REQUIREMENTS:**

* Operating System - Windows 10/above
* Programming Language - Python 3.7