

## A Finger Vein Recognition System

Finger vein identification provides various security ways for authentication purposes. In this paper, we present a complete finger vein identification system using deep machine learning with Convolutional Neural Network (CNN). Images are acquired using methods ranging from precision photography to complex physical and chemical processing techniques and saved as the database. Then the features are extracted from all these images through layers designed for CNN. The features of preprocessed data are fed into the CNN as input to train and test the network. The experimental results demonstrated on a database using MATLAB show high accuracy of 90% recognition of partial or full finger veins in the considered database.

**Domain:** Artificial Intelligence / Deep Learning

**Technology:** MATLAB