Soft Computing
Job Performance Evaluation Using Back-propagation Network

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1 Assignment

The aim of the project is to assemble a mechanical device and create software for acquiring 2D hand geometry using a line camera. A solution for camera mount and hand placement is proposed in the following sections for best geometry acquisition and image reconstruction.

2 Theoretical Background

3 Data

4 Implementation

5 Achieved Results

Solution described in this report was assembled and implemented with excellent results. Integration of all hardware parts and software control results in images being scanned quickly in resolution exceeding 60 MPx. During testing it was proved to be effective to not only scan images of hand geometry but also fingerprints which leads to general purpose sensoric solution for capturing multiple biometric data. Furthermore, the solution is able to function with very limited resources necessary and provides instant access to scanned images via a web serber. Complete scan of both of the subject's hands can be done under 1 minute.

6 Summary