

Biometric Authentication Systems

The Thesis Submitted for the Degree of

DOCTOR OF PHILOSOPHY

In

ENGINEERING

By

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(Deemed-to-be University)



**MUKESH PATEL SCHOOL OF TECHNOLOGY
MANAGEMENT & ENGINEERING**

Vile Parle (W), Mumbai-56

2008-2011

CERTIFICATE

This is to certify that the work entitled "**Biometric Authentication Systems**", is a piece of research work done by **Mr. Vinayak Ashok Bharadi** under my guidance and supervision for the degree of Doctor of Philosophy in Engineering of MPSTME, SVKM's NMIMS (Deemed-to-be University), Mumbai, India.

To the best of my knowledge and belief the thesis:

- (i) embodies the work of the candidate herself;
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- (iv) is up to the standard in respect of both, the contents and language for being referred to the examiner.

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Place: Mumbai

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(Dr. H. B. Kekre)

Dr. D. J. Shah

Dean, MPSTME, SVKM's NMIMS

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DECLARATION

I hereby declare that the thesis entitled "**Biometric Authentication Systems**" is my own work conducted under the supervision of **Dr. H. B. Kekre** at MPSTME, SVKM's NMIMS (Deemed-to-be University), Mumbai, India.

I further declare that to the best of my knowledge the thesis does not contain any part of any work which has been submitted for the award of any degree either in the University or in any other University without proper citation.

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Signature of Supervisor

(Mr. Vinayak Ashok Bharadi)

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Thesis Approval Certificate

This is to certify that the thesis entitled "**Biometric Authentication Systems**" for Ph.D. in Engineering submitted to NMIMS (Deemed-to-be University), by Mr. Vinayak Ashok Bharadi, a bonafied student of Mukesh Patel School of Technology Management and Engineering, Vile-parle (W), Mumbai-56 has been evaluated and recommended for the award of Doctor of Philosophy Degree in Engineering.

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Supervisor

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Dr. D. J. Shah

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Dedicated to

My Parents

Ashok N. Bharadi & Maya A. Bharadi

&

My Guide

Dr. H. B. Kekre

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Mr. Vinayak Ashok Bharadi