THESIS TITLE

by

Name Surname

B.S, Computer Engineering, Boğaziçi University, 2006

Submitted to the Institute for Graduate Studies in
Science and Engineering in partial fulfillment of
the requirements for the degree of
Master of Science

Graduate Program in Computer Engineering

Boğaziçi University

2008

THESIS TITLE

APPROVED BY:

Prof. Name Surname .....
(Thesis Supervisor)

Prof. Name Surname .....

Prof. Name Surname .....

DATE OF APPROVAL: DD.MM.YYYY

ACKNOWLEDGEMENTS

Acknowledgements come here...

ABSTRACT

THESIS TITLE

The abstract will be here.

ÖZET

TEZ BAĞLIĞI

Tamamlanacak...

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF SYMBOLS/ABBREVIATIONS

a_{ij}	Description of a_{ij}
$\mathbf{A}$	State transition matrix of a hidden Markov model
α	Blending parameter *or* scale
$\beta_t(i)$	Backward variable
Θ	Parameter set
2D	Two Dimensional
3D	Three Dimensional
AAM	Active Appearance Model
ASM	Active Shape Model

1. INTRODUCTION

Start with an introduction...

1.1. Sample section

And put a sample graphics to this section as seen in Figure 1.1.

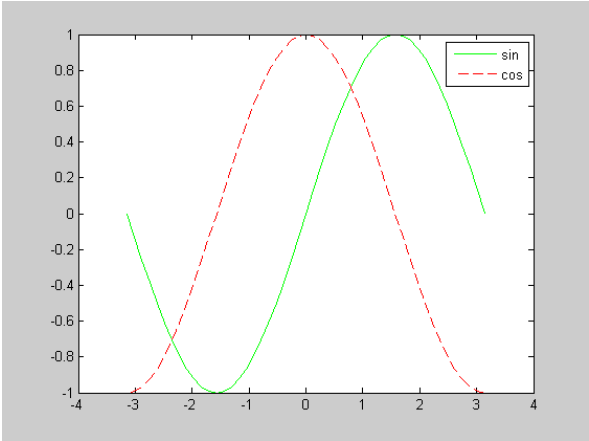

Figure 1.1. Sin and Cosine

Now, let us cite some studies as Aran *et al* [1, 2], Alpaydin [3] and Ari *et al* [4]. Observe that they are ordered in the references chapter in the same order as they are cited. Let us put a sample table as seen in Table 1.1.

Table 1.1. Sample table

	Header 1	**Header 2**
Row 1	Bla bla bla	Bla bla bla
Row 2	Bla bla bla	Bla bla bla

Finally, we will put a sample algorithm (PCA algorithm) using the relevant package in a figure as shown in Figure 1.2 and sample equations.

Require $\mathbf{s_i}$, $i = 1, 2, \ldots, N$ are normalized

Compute the mean $\bar{\mathbf{s}}$ using Eq. 1.1;

Form the $N \times 2L$ matrix $\mathbf{Q}$ as defined in Eq. 1.2;

if $N < 2 \times L$ **then**

  $\mathbf{Q} \Leftarrow \mathbf{Q}^T$;

end if

Compute the covariance matrix $\mathbf{C}_s$ using Eq. 1.3;

Decompose $\mathbf{C}_s$ to its eigenvectors $\mathbf{e}_k$ and eigenvalues λ_k satisfying Eq. 1.4;

if $N < 2 \times L$ **then**

  for $k = 1$ to K **do**

    $\mathbf{e}_k \Leftarrow \mathbf{Q}\mathbf{e}_k$;

    $\mathbf{e}_k \Leftarrow \mathbf{e}_k / ||\mathbf{e}_k||$ (normalization);

  end for

end if

Figure 1.2. Principal Component Analysis Algorithm

$$\bar{\mathbf{s}} = \frac{1}{N}\sum_{i=1}^{N}\mathbf{s}_i \tag{1.1}$$

$$\mathbf{Q} = \begin{bmatrix} \mathbf{s}_1 - \bar{\mathbf{s}} & \mathbf{s}_2 - \bar{\mathbf{s}} & \cdots & \mathbf{s}_N - \bar{\mathbf{s}} \end{bmatrix}_{2L\times N} \tag{1.2}$$

$$\mathbf{C}_s = \frac{1}{N}\mathbf{Q}^T\mathbf{Q} \tag{1.3}$$

$$\mathbf{C}_s\mathbf{e}_k = \lambda_k\mathbf{e}_k \tag{1.4}$$

2. EXPERIMENTS AND RESULTS

Experiments and results come here...

3. CONCLUSIONS

To be completed ...

Notes:

- Please refer to the original files of FBE, these are not guaranteed to be accepted by FBE. Check yourself...
- You may use Bakoma or Latex Editor (LEd) to edit latex on Windows.
- For managing your bibtex files, JabRef is a very nice software.

REFERENCES

1. Aran, O., I. Ari, A. Benoit, A. Carrillo, F. Fanard, P. Campr, L. Akarun, A. Caplier, M. Rombaut, and B. Sankur, "Sign Language Tutoring Tool", *Proceedings of eNTERFACE 2007, The Summer Workshop on Multimodal Interfaces*, Vol. 21, 2006.

2. Aran, O., I. Ari, A. Guvensan, H. Haberdar, Z. Kurt, I. Turkmen, A. Uyar, and L. Akarun, "A Database of Non-Manual Signs in Turkish Sign Language", *Signal Processing and Communications Applications, 2007. SIU 2007. IEEE 15th*, pp. 1–4, 2007.

3. Alpaydin, E., "Introduction To Machine Learning", 2004.

4. Ari, I., A. Uyar, and L. Akarun, "Facial Feature Tracking and Expression Recognition for Sign Language", *International Symposium on Computer and Information Sciences*, 2008, submitted.