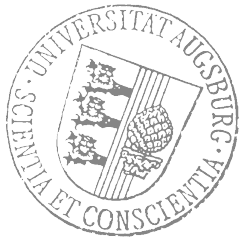
This is actually the first page of the thesis and will be discarded after the print out. This is done because the title page has to be an even page. The memoir style package used by this template makes different indentations for odd and even pages which is usally done for better readability.

University of Augsburg
Faculty of Applied Computer Science
Department of Computer Science
Master's Program in Computer Science



Master's Thesis

Brief Title

Full Title of the Thesis

submitted by
Forename Surname
on 31.02.2010

Supervisor:
Prof. Dr. Elisabeth André aus Augsburg

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Reviewers:
Prof. Dr. Elisabeth André
Prof. Dr. Elisabeth André

You can write a dedication here, but never more than a single line.

Abstract

This paper aims at investigating the use of EEG signals in classifing a user's emotional state, as a first step of integrating into the SSI framework. The data corpus used is taken from the DEAP and used to solve four different binary classification problems relating to affectional state. First, different approaches for feature extraction and selection were researched, among those, the method of calculating the PSD (Power Spectrum Denisty), based on the FFT, was found to be the most widely used. This is due to the simplicity of implementation and the efficincy of using the resulted features for classification. Other, more complex methods, were used and then discarded as they seemed to offer no advantage in terms of classification accuracy. For classification, three standard classifier were tested for cross comparing accuracy as well as comparison with the classification results reported by pervious similar works with the DEAP. The tests consisited of two experiments, the first experiment used the data for each subject separatly for classification, before calculating the average classification accuracy over all subjects. This shows the expected rate of correct classification for a single user. The second experiment included the entire data of all subjects as a single coprus for classification. This is to demonsterate the generability of an EEG classifier for many users with different EEG patterns.Finally, a new classifier, previously proposed in the litereture for use in EEG classification, was implemented and tested, using the previous experiments, on the same data. The end of this paper reports a comparison between the resulting accuraccies of theses classifications as well as future recommendations for further improvements.

Acknowledgments

Acknowledgements writing allows an author to tell some words of gratitude to those, who turned out to be rather helpful during your thesis writing process. Of course, acknowledgements are not an integral part of a thesis and if you did all your work on your own, you can omit this part. Writing acknowledgements is not obligatory.

Statement and Declaration of Consent

Statement

Hereby I confirm that this thesis is my own work and that I have documented all sources used.

Max Mustermann

Augsburg, 00.00.0000

Declaration of Consent

Herewith I agree that my thesis will be made available through the library of the Computer Science Department.

Max Mustermann

Augsburg, 00.00.0000

Contents

Chapter 1

Introduction

1.1 Motivation

1.2 Objectives

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Chapter 2

Theoretical Background

2.1 Entenhausen

Figure 2.1 shows an image while you can cite a paper with [1] or several papers with [2, 3].

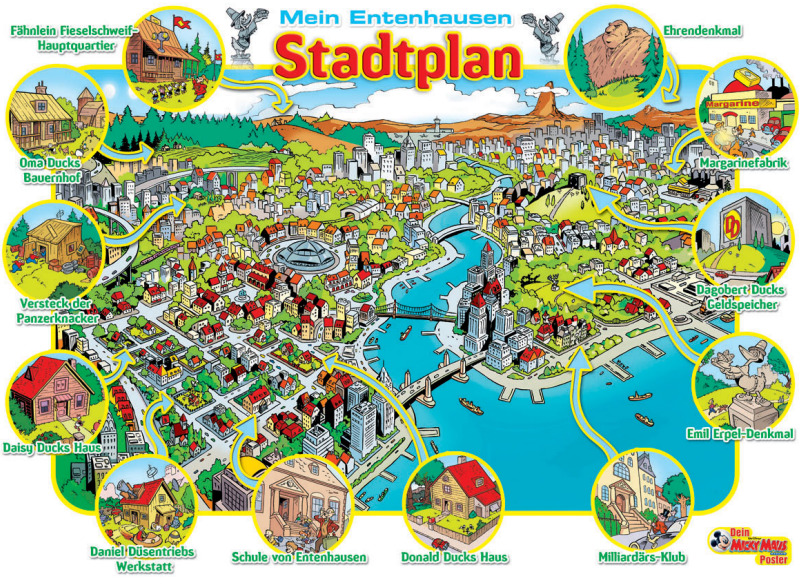

Figure 2.1: The map of Entenhausen

2.2 Section

2.2.1 PseudoCode

If you want to show the implementation of some algorithm that is essential to the solution found in your thesis then do not write plain prgoram code. Use an abstract pseudocode representation instead. No one wants to see `C++` code or `Java` code in your thesis because it is presumed that you are able so write such a program as a computer scientist. Generally, writing program code is bad style and just blows up your thesis but will never be read by anyone but you. It is nothing scientific but your handwork while your thesis should show that you are able to do research as a scientist. A pseudocode example could look like the following:

Algorithm 2.1 The Dekker Algorithm

Require: $n \in \mathbb{N}$
Require: $0 \leq i, turn \leq n$
Require: $\forall 0 \leq j \leq n : (interrested[j] = false)$
  procedure DekkerAlgorithm(n, i)
    $interrested[i] \leftarrow true$
    while $\exists 0 \leq j \leq n : (j \neq i \wedge interrested[j] = true)$ **do**
      if $turn \neq i$ **then**
        $interrested[i] \leftarrow false$
        while $turn \neq i$ **do**
        end while
        $interrested[i] \leftarrow true$
      end if
    end while

    CRITICAL SECTION

    $turn \leftarrow Random(n)$
    $interrested[i] \leftarrow false$
  end procedure

Be sure that each pseudocode listing is listed in the list of algorithms at the end of your thesis.

Bibliography

[1] David Harel and Amir Pnueli. On the development of reactive systems. In *Logics and Models of Concurrent Systems*, volume 13 of *Nato Asi Series F: Computer And Systems Sciences*, pages 477–498, New York, NY, USA, 1985. Springer-Verlag New York, Inc. [cited at p. 3]

[2] Elisabeth Andre and Thomas Rist. *Cooperative Information Agents IV - The Future of Information Agents in Cyberspace*, volume 1860 of *Lecture Notes in Computer Science*, chapter Adding Life-Like Synthetic Characters to the Web, pages 51–89. Springer Berlin, Heidelberg, February 2004. [cited at p. 3]

[3] Thomas Rist, Stephan Baldes, Patrick Gebhard, Michael Kipp, Martin Klesen, Peter Rist, and Markus Schmitt. Crosstalk: An interactive installation with animated presentation agents. In *COSIGN '02: Proceedings of the 2th Conference on Computational Semiotics for Games and New Media*, Augsburg, 2002. [cited at p. 3]

Appendices

Appendix A

First Appendix

This is the place where the appendices are supposed to be. Appendices are everything that would just blow up your thesis but are still of some interrest for a reader that wants to get a deeper grasp on the details of your work.

List of Figures

List of Tables

List of Algorithms