

Some Title

Some subtitle

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Computer Science, xXx

Semester Project



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AALBORG UNIVERSITY

STUDENT REPORT

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Project Title

Abstract:

This is the abstract.

Theme:

Scientific Theme

Project Period:

Fall Semester 2022

Project Group:

xXx

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AALBORG UNIVERSITET

STUDENTERRAPPORT

Titel:

Rapportens titel

Abstract:

Her er resuméet

Tema:

Semestertema

Projektperiode:

Efterårssemestret 2010

Projektgruppe:

XXX

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Rapportens indhold er frit tilgængeligt, men offentliggørelse (med kildeangivelse) må kun ske efter aftale med forfatterne.

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Preface

This is the preface. You should put your signatures at the end of the preface.

Aalborg University, September 23, 2022

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Chapter 1

Introduction

Welcome to Aalborg University (AAU). Here we use \LaTeX to typeset our high quality reports. Checkout the Appendix A for examples.

Chapter 2

Problem Statement

2.1 Audio

For models that predict what music is popular or what genre the music is we would like to see how big of an effect feature engineering has for the model. We would like to investigate which kind of dimensionality reduction works best considering both linear and nonlinear approaches and what they contribute to in the model and when it is a better fit. The performance of these dimensionality reductions is evaluated based on how they affect the performance of the model and their visualisations.

2.2 Pokemon

For a model that clasifies Pokemon we would like to see how big of an effect feature engineering has for the model. We would also like to investigate which kind of dimensionality reduction works best and consider both linear and nonlinear approaches and what they each contribute and when theyre correct to use. The performance of these aproaches might be evaluated based on their visualisations and how they affect model performance.

2.3 Match data

For models that predict the outcome of football matches we would like to see how big the effect of feature engineering has for the model. We would also like to investigate which kind of dimensionality reduction works best considering both linear and nonlinear approaches and what they contribute to in the model and when it is a better fit. The performance of these dimensionality reductions is evaluated based on how they affect the performance of the model and their visualisations.

Acronyms

AAU Aalborg University. 1

Bibliography

- [1] Daniel Runge Petersen. *AAU-Dat templates*. URL: <https://github.com/AAU-Dat/templates> (visited on 08/17/2022).

Appendix A

Examples

When working in \LaTeX we have basic text, such as this, and non-basic elements called 'floats'. They are called floats because they float about the page, trying to be as unobtrusive as possible. The common floats used by us Computer Science students are: Figures, Tables, Listings, and potentially Algorithms.

A.1 Figures

Figures include an image or a graphical frame of some sort.

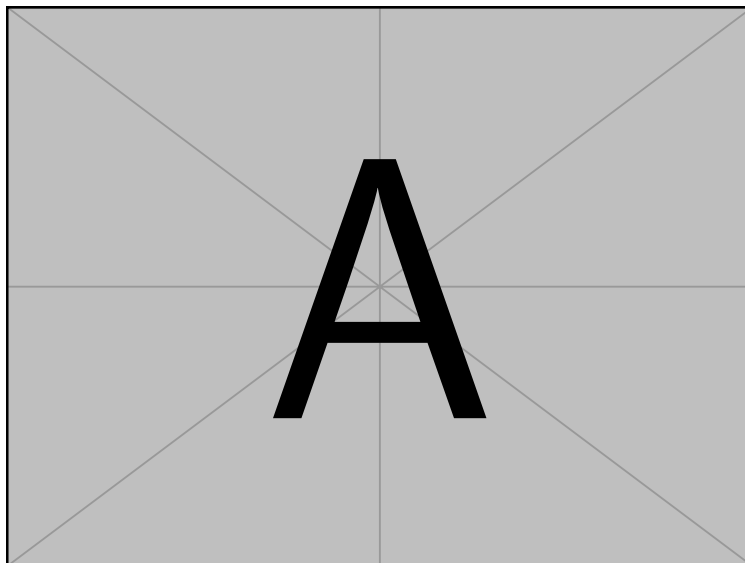


Figure A.1: An example of a figure float with width at 70% text width - **do not** use scale.

A.2 Tables

Tables are often more difficult than figures, but they can look gorgeous.

Features	Events	Threads	Protothreads
Control structures	no	yes	yes
Debug stack retained	no	yes	yes
Implicit locking	yes	no	yes
Preemption	no	yes	no
Automatic variables	no	yes	no

Table A.1: An example table. Do not use *vertical* (|) lines if you can avoid it.

A.3 Listings/Algorithms

We can use the listing float for both code and pseudocode, but in case you want to distinguish between them, the Algorithm environment is a good substitute for pseudocode.

```
#include <stdio.h>

int main() {
    printf("Hello World!");
    return 0;
}
```

Listing A.1: Example of C code with standard styling.

```
1 import numpy as np
2
3 def incmatrix(genl1,genl2):
4     m = len(genl1)
5     n = len(genl2)
6     M = None #to become the incidence matrix
7     VT = np.zeros((n*m,1), int) #dummy variable
```

Listing A.2: Example of python code with custom styling from preamble and lines highlight.

For pseudocode, if you don't want to use the listing float, you can use the algorithm float instead.

```
INSERTION-SORT( $A$ )
1  for  $j = 2$  to  $A.length$ 
2       $key = A[j]$ 
3      // Insert  $A[j]$  into the sorted sequence  $A[1..j-1]$ .
4       $i = j - 1$ 
5      while  $i > 0$  and  $A[i] > key$ 
6           $A[i+1] = A[i]$ 
7           $i = i - 1$ 
8       $A[i+1] = key$ 
```

Algorithm A.1: Example of pseudocode (codebox) in an algorithm float.

A.4 Floats and content

Note that Figures use `includegraphics`, Tables use `tabular`, Listings use `minted` and Algorithms use `codebox` in the above example. This is NOT a hard and fast rule. You could have an Algorithm with an `includegraphics` screengrab, or a Listing with a `tabular` to create columns for code side by side comparisons.