DEEP LERNING IN KERNEL MACHINES

A PROJECT REPORT

submitted by

STUD NAME

Reg. No

to

the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree

of

Bachelor of Technology

in

Computer Science and Engineering

Department of Computer Science and Engineering

College of Engineering Muttathara

Thiruvananthapuram

May 2020

DECLARATION

I undersigned hereby declare that the project report “Deep Lerning in Kernel Machines” , submitted for partial fulfillment of the requirements for the award of degree of Bachelor of Technologyof the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of Afzal A. L.. This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

Place :Thiruvananthapuram Signature

Date : Stud name

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COLLEGE OF ENGINEERING MUTTATHARA,
THIRUVANANTHAPURAM

CERTIFICATE

This is to certify that the report entitled **"Deep Lerning in Kernel Machines"** submitted by "**Stud name**" to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technologyin Computer Science and Engineeringis a bonafide record of the project work carried out by him/her under my/our guidance and supervision.. This report in any form has not been submitted to any other University or Institute for any purpose. .

Internal Supervisor(s)

External Supervisor(s) (if any)

Coordinator(s)

Guide: Afzal A. L.

1. Bindhu J. S.
2. Suja Kumari N

Bindhu J S

Head of the Department

ACKNOWLEDGMENT

Though only my name appears on the cover of this thesis, the work presented in this report would not have been possible without the constant support and encouragement of many great people.

ABSTRACT

In this thesis, I designed and implemented a compiler which performs optimizations that reduce the number of low-level floating point operations necessary for a specific task; this involves the optimization of chains of floating point operations as well as the implementation of a "fixed" point data type that allows some floating point operations to simulated with integer arithmetic. The source language of the compiler is a subset of C, and the destination language is assembly language for a micro-floating point CPU. An instruction-level simulator of the CPU was written to allow testing of the code. A series of test pieces of codes was compiled, both with and without optimization, to determine how effective these optimizations were.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CNN Convolutional Neural Networks

DBN Deep Belief Network

RNN Recurrent Neural Networks

CHAPTER 1

THE FIRST CHAPTER

1.1 SAMPLE CODE TO INCLUDE IMAGES IN LATEX

To include an image in ur document u can use the following code and it can be referenced as Figure: 1.1.

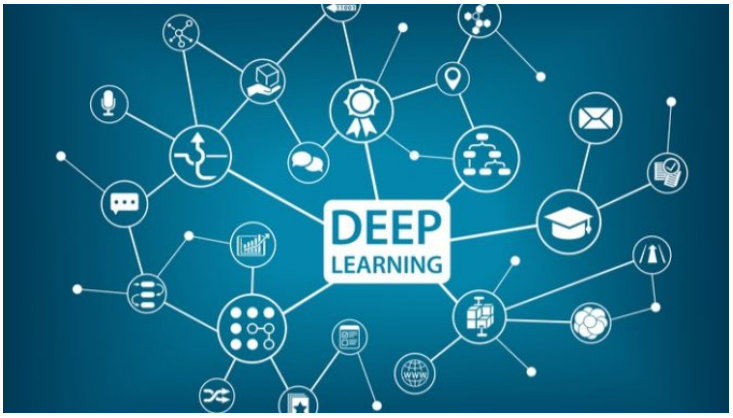

Figure 1.1: Deep Learning

1.1.1 sub section

Figure environment can be used to format the size, position of caption etc. of images.....

1.2 SAMPLE CODE TO INCLUDE TABLES IN LATEX

https://www.tablesgenerator.com/ → here u can easily create ur tables on-line. and then copy the generated code in your document.

Merging of columns and rows are also possible. You can refer tables as , It has been shown in Table: 1.1. It is good practice to label all images with a prefix fig:, tables with tab: and Equations prefixed with equa:.

Table 1.1: This is our first table

Name	Phone
Afzal	678788
Vinod	68000
Rakesh	55782

1.3 EQUATIONS IN LATEX

You can easily create latex code of ur equation on line in https://www.codecogs.com/latex/eqneditor.php?lang=fr-fr There are different methods to include Equations in your documents.

$$z = \sum_{i=1}^{n} x^{i+1} \tag{1.1}$$

Equation 1.1 shows .....

1.4 SAMPLE CODE TO REFER BIBLIOGRAPHY

Here u can use bib text. u can refer as Afzal et al. (2017)

1.5 SAMPLE CODE TO ADD NOMENCLATURE

The fast layer wise learning algorithm for Deep Belief Network (DBN) by Hinton was a breakthrough in deep learning approaches. Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) etc.

In order to list the nomenclature in List of Abbreviations u have to execute the following command in TeXstudio.

1. Click Tools $\rightarrow$ open Terminal
2. move to the directory where the main.txt resides
3. type the following and press enter
4. makeindex -s nomencl.ist -o main.nls main.nlo

1.6 DUMMY TEXT

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetuer.

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros, malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit.

Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

CHAPTER 2

THE SECOND CHAPTER

BIBLIOGRAPHY

Afzal, A. L., Asharaf, S., and Nikhitha (2017). Deep kernel learning in core vector machines. *Pattern Analysis and Applications*, 21:1–9.

Appendices

APPENDIX A

SOURCE CODE FOR FACE RECOGNITION IN PYTHON

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
int r, c, A[100][100], T[10][10], i,j;
printf("Enter number of rows and columns of Matrix: ");
scanf("%d%d", &r,&c);
// Enter the Elements
printf("\nEnter elements of matrix:\n");
for(i=0; i<r; ++i)
for(j=0; j<c; ++j)
{
printf("Enter element a [%d][%d]: ",i,j);
scanf("%d",&A[i][j]);
}



return 0;
}
```

LIST OF PUBLICATIONS

1. **A L Afzal** and **S Asharaf**. Deep kernel learning in core vector machines. Pattern Analysis and Applications, pages 1–9, 2017.