# FORECASTING LOAD DEMAND USING ARTIFICIAL NEURAL NETWORK (ANN)

Project Report is presented in partial fulfillment for the award of the
Bachelor of Electrical Engineering (Honours)
(UNIVERSITI TE]KNOLOGI MARA)

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# ACKNOWLEDGEMENT

# ABSTRACT

Recently, Artificial Neural Network is widely used in intelligent computational technology for data compression, pattern recognition and machine learning. This paper presents the development of artificial neural network (ANN) using Back-propagation to forecast the load demand at Maintenance Building at UiTM Shah Alam campus. The data is taken from the Maintenance Department that has installed remote metering system. The programme was developed using Borland C++ version 5.02.

# TABLES OF CONTENTS

# CHAPTER 1

# INTRODUCTION

## 1.1 Introduction

An industrial country will consume all sorts energy sources to groom their economy. Electrical energy is the most commonly used in the developed country like Malaysia, efficient energy usage is called to promote economic growth.

UiTM, as a higher learning institution is also expanding its energy usage. In order to monitor the energy usage, UiTM has installed remote metering system. This system can measure and record the energy consumption data, remote from the meter. The data can also be retrieved from a Personal Computer. The data obtained can be converted or analysed to a useful information in the form of graphical and report output.

Artificial Neural Network is now widely being used in power system application. ANN models are based on the activity in the human brain such as learning, generalization, evaluation, recognition and complex control [1].

Load forecasting has become in recent years one of the major areas of research in electrical engineering, and most traditional forecasting models and artificial intelligence techniques have been tried out in this task. Artificial neural networks (ANNs) have lately received much attention, and a great number of papers have reported successful experiments and practical tests with them.

The importance of accurate forecasts in planning is that ensures the availability of supply of electricity, as well as providing the means of