FYP-2 Project Report

# Ac Motor Control Using Predictive Control Scheme


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**A Project report submitted in partial Fulfillmentof the requirement for the degree of Bachelors in Electrical Engineering**


**Department of Electrical Engineering**

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**Lahore, Pakista**

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# UNDERTAKING

We hereby certify that the work which is being presented in the BS Project Report entitled " **VFD TO CONTROL THE SPEED OF 3-PHASE AC INDUCTION MOTOR AT VARIABLE LOAD "** , in partial fulfillment of the requirements for the award of the **Bachelors of Technology in Electrical Engineering** and submitted to the Department of School of Engineering of University of Management and Technology Lahore is an authentic record of our own work carried out during a period of **October 2014 to August 2015 ( 7th& 8th semester)** under the supervision of **Muhammad FahadUsman Khan, SEN Department.**

The matter presented in this project report has not been submitted by us for the award of any other degree elsewhere.

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This is to certify that the above statement made by the students is correct to the best of my knowledge.

**Approved**

Project Advisor_____

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provided us with invaluable help information relating to the some typical topics in our project.

A good way to gain better overall performance, we need to have to examine our outside surroundings. There are masses of forces so that it will act upon us to get the higher result, however for that we ought to alternate our mind-set to see them. Sure, we are occasionally annoyed because of the problems we can’t solve it. But the next day we act at the hassle with equal efficiency and energy we have. furthermore, we're especially grateful to our parents and teachers who had been there all the times, backing us up and their undue help has been the pushing power for us to complete mission inside time.

## Abstract

Ac motor is widely used in industry for a long time.It is used for various purposes. Because of its larger use in industryits control strategies have given much importance in last decades. There are many issues related with it but the commonly faced issue is its speed control. Speed of motor varies as the load changes and abrupt the system. A regular change in voltage and frequency is required to keep the speed of motor constant. Different Control

Schemes are available for speed controlling of motor. Predictive control scheme is latest technique used for speed control. MPC has become popular because of development in digital control platform. It is a multi-input multi-output scheme. It predicts the future behavior of system and generates the control signals accordingly. It has modulation based implementation. SPWM is the simplest modulation technique used for the controlling of converter. Controller passes control signals to Converter which generate the required Voltage signals.