CERTIFICATE

This is to certify that Project Report entitled **"DETECTING MISSING HCPCS CODES THROUGH MACHINE LEARNING APPROACH"** submitted by **Amey Kadam** (roll no. 2K16/CSE/02) in partial fulfilment of the requirement for the award of degree Master of Technology (Computer Science and Engineering) is a record of the original work carried out by him under my supervision.

Project Guide
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DECLARATION

I hereby declare that the Major Project-II work entitled **"DETECTING MISSING HCPCS CODES THROUGH MACHINE LEARNING APPROACH"** which is being submitted to Delhi Technological University, in partial fulfilment of requirements for the award of the degree of Master of Technology (Computer Science and Engineering) is a bonafide report of Major Project-II carried out by me. I have not submitted the matter embodied in this dissertation for the award of any other Degree or Diploma.

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ABSTRACT

Currently hospitalisation systems in the US are facing huge losses around 5 billion a year due to the problem of missing HCPCS codes in the insurance claim. The insurance companies do no compensate the amount for the missing codes in the bill list. The missing HCPCS codes problem occur usually in the case of outpatients. There are only one or two operators to process the bill for the patients, which is done manually and chances for the operators for missing of some codes are high. Therefore, we can see that on a daily basis; if such codes are missing largely the losses annually accumulate to a high amount. For incurring these losses, the hospitals hire accountants, who solve the problem by analysing the missing codes and recover some losses. Unfortunately, the hospitals have to pay a huge amount to these accountants too. So the problem of revenue still sustains. We in this project have developed a model for the hospital systems, which can help in finding the missing codes and account for the losses being faced. We have used Market Basket Analysis on FP Growth algorithm to detect the missing HCPCS codes in the bills. This model can solve the problem completely and help the hospitals to avoid such high losses.

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1.	MV:	Missing Value
2.	FP:	Frequent Pattern
3.	RDD:	Resilient Distributed Dataset
4.	API:	Application Program Interface
5.	MBA:	Market Basket Analysis
6.	CMS:	Center for Medicare and Medicaid Services
7.	HCPCS:	Healthcare Common Procedural Coding System
8.	AMA:	American Medical Association
9.	BPFP:	Balanced Parallel FP-Growth
10.	PFP:	Parallel FP-Growth
11.	SL:	Small Large