### **Smart Vending Machine Software For Specially Abled**

Summer Training Report submitted in partial fulfilment of the requirement for the degree of

B.Tech

In

Computer Science & Engineering



**Training Coordinator** 

Ms. Tanu Sharma

**Assistant Prof.** 

By

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**Karan Rawlley** 

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Bhagwan Parshuram Institute of Technology

PSP-4, Sector-17, Rohini, Delhi - 89

October 2018

#### **DECLARATION**

This is to certify that Report entitled "Smart Vending Machine Software For Specially Abled" which is submitted by us in partial fulfilment of the requirement for the award of degree B.Tech in Computer Engineering to BPIT, GGSIP University, Dwarka, Delhi comprises only my original work and due acknowledgement has been made in the text to all other material used.

Date:	Name of Students:
	Geetansh Chawla
	Karan Rawlley

Mayank Jha

**ACKNOWLEDGEMENT** 

No project is ever complete without the guidance of those experts who have already

traded this past before and hence become master of it and as a result, our leader. So we

would like to take this opportunity to take all those individuals who have helped us in

visualizing this project.

We express our deep gratitude to our project guide and mentor Ms. Tanu Sharma for

providing timely assistance to our query and guidance that she gave owing to her

experience in this field for past many years. She had indeed been a lighthouse for us in

this journey.

We extend our sincere appreciation to all our Professors from BPIT for their valuable

inside and tip during the designing of the project. Their contributions have been valuable

in so many ways that we find it difficult to acknowledge of them individually.

We are also grateful to our HOD **Dr. Deepali Virmani** and our Principal **Prof. Payal** 

Pahwa for extending their help directly and indirectly through various channel in our

project work.

Last but not the least we thank our parents too without whose incessant support,

encouragement and love work would have not been possible.

Geetansh Chawla

Karan Rawlley

Mayank Jha

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#### **COMPANY CERTIFICATE**





## CERTIFICATE OF ACHIEVEMENT

is proudly presented to

### Mayank Iha

(B.Tech. enrollment number: o4220802716)

for successfully completing 4 weeks summer training in

#### Machine Learning with Python

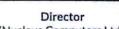
and project developed: Vending Machine Software For Specially abled People

from 4th July, 2018 to 31st July, 2018

Conducted at Bhagwan Parshuram Institute of Technology, Rohini, Delhi

Certificate ID: TECH/011216

Issued on: 25th Sept., 2018



(Nucleus Computers Ltd.)

Testing Partner



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Certification can be verified at info@techexplica.com



# CERTIFICATE OF ACHIEVEMENT

is proudly presented to

## Geetansh Chawla

(B.Tech. enrollment number: o2220802716)

for successfully completing 4 weeks summer training in

Machine Learning with Python

and project developed: Vending Machine Software For Specially abled People

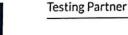
from 4th July, 2018 to 31st July, 2018

Conducted at Bhagwan Parshuram Institute of Technology, Rohini, Delhi

Certificate ID: TECH/011214 Issued on: 25th Sept., 2018

Marie

Director (Nucleus Computers Ltd.)





Certificate of









Certification can be verified at info@techexplica.com

#### TRAINING COORDINATOR CERTIFICATE

This is to certify that Report entitled "Smart Vending Machine Software For Specially Abled" which is submitted by Geetansh Chawla, Karan Rawlley and Mayank Jha in partial fulfilment of the requirement for the award of degree B.Tech in Computer Engineering to BPIT, GGSIP University, Dwarka, Delhi is a record of the candidate own work and the matter embodied in this report is adhered to the given format.

Date:	Coordinato
Date:	Coorain

#### **ABSTRACT**

Our project, Smart Vending Machine Software For Specially Abled, analyzes the biometric identification and tracking related technologies of human-computer interaction. Based on face detection algorithm, we propose a position-based head motion detection algorithm, which does not depend on the specific biometric identification and tracking. It uses feature classification method to detect eye opening and closing actions. We also designed a software system to operate computer by image detection of head and eye movements. The combinations of head and eye movements, are mapped to various mouse events, including move, click, and so on. This system can be used for the upper limb disabled who fail to use the traditional mouse and keyboard. Furthermore, it can also be used for general computer users to do neck rehabilitation training, computer somatic games, etc.