

**PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**MINI PROJECT GUIDE LIST**

**ODD SEMESTER 2023-2024**

CLASS: II MCA

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5.	M.Bakkiyalakshmi		M. Bakkiyalakshmi	
6.	R.Srinivetha		R. Srinivetha	
7.	C.Denish	Mrs.T.Gayathri	C. Denish	T. Gayathri 11/8/22
8.	S.Muthu		S. Muthu	
9.	R.Praveen		R. Praveen	
10.	M.Vignesh		M. Vignesh	
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13.	N.Nagasanjay		N. Nagasanjay	
14.	S.senthilkumar		S. Senthilkumar	
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### Submission details

Date	Review
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20.09.2023	Full module
29.09.2023	Document submission
12.10.2023	Full document with binding

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## PG & Research Department of Computer Science

### Mini Project Title Nov/Dec-2023

**Class : II MCA**

S.No.	Register No.	Student Name	Project Title
1.	C22PG127CAP001	P.Chandru	Anomaly Detection in Cloud Servers
2.	C22PG127CAP002	C.Denish	Quality Score Based Image Corner Detection
3.	C22PG127CAP004	C.Gokulan	IOT Industry Automation Using Raspberry Pi
4.	C22PG127CAP005	S.Muthu	Weather Forecasting System in Python
5.	C22PG127CAP006	N.Nagasanjay	Raspberry Pi Personal Cloud Storage
6.	C22PG127CAP007	R.Praveen	Virtual voice Assistant using Python
7.	C22PG127CAP008	S.Senthilkumar	IOT Based Real time Weather Monitoring and Reporting System
8.	C22PG127CAP009	S.Vasanthakumar	IOT Air pollution Monitoring system
9.	C22PG127CAP010	M.Vignesh	Mobile App control home Automation using IOT
10.	C22PG127CAP011	S.Vinoth	Air Pollution Monitoring System using IOT
11.	C22PG127CAP012	M.Bakkiyalakshmi	A Semantic Web Based Scientific News Aggregation
12.	C22PG127CAP013	C.Meenatchi	A Light weight Secure Data Sharing Scheme for Cloud Computing
13.	C22PG127CAP014	S.Naveena	Cell Phone Operated mobile Bug Using IOT
14.	C22PG127CAP015	R.Srinivedha	Raspberry Pi based smart Surveillance system
15.	C22PG127CAP016	N.Prakash	Python Website Blocker

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**PG & Research Department of Computer Science**

**Mini Project Title Nov/Dec-2023**

**Class : II M.Sc(CS)**

S.No.	Register No.	Student Name	Project Title
1.	C22PG127CSC001	J.Dharshini	Predictive Analysis in E-Commerce for Customer Behavior and Forecasting
2.	C22PG127CSC002	A.Haripriya	Attendance Based on face Recognition System

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**PREDICTIVE ANALYSIS IN E-COMMERCE FOR  
CUSTOMER BEHAVIOR AND FORECASTING**

A Project Work submitted in partial fulfillment of the  
requirements For the award of the degree of

**Master of Science in Computer Science**

to the

**Periyar University, Salem-11**

By

**J.DHARSHINI**

**REG.NO:C22PG127CSC001**

Under the Guidance of

**Mrs. T.GAYATHIRI MCA.,M.Phil.,**




**PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

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**NOVEMBER-2023**

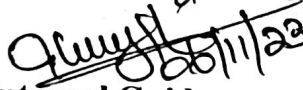
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**CERTIFICATE**

This is to certify that the Project Work entitled "PREDICTIVE ANALYSIS IN E-COMMERCE FOR CUSTOMER BEHAVIOR AND DEMAND FORECASTING" submitted in partial fulfillment of the requirements of the award of the degree of Master of Science in Computer Science to the Periyar University, Salem is a record of bonafide work carried out by J.DHARSHINI Reg.No:C22PG127CSC001 under my supervision and guidance.

Place: Tiruchengode

Date: 06/11/23

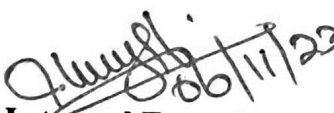
  
Internal Guide

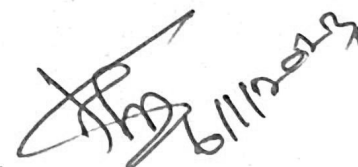
(Mrs. T.GAYATHRI MCA., M.Phil.,)

  
Head of the Department

(Mrs. R.BHARATHI M.Sc., M.Phil.,)

Submitted for the Project Viva Voce Examination held on ..06.11..2023.....

  
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## ABSTRACT

The project entitled “**Predictive Analysis in E-Commerce for Customer Behaviour and Demand Forecasting**” is a web based application which has been designed using ASP.Net 2013 as front end tool and MS SQL Server 2012 as back end tool.

In the present project, Predictive analytics is a set of technologies and approaches to working with historical data collected from the online sources as secondary data. The present software is mainly used to make future predictions by analyzing the historical dataset of about online purchases made by various customers in multiple times.

The proposed system evaluates the dataset which includes the Sales number, Sales date, Main Category name, Sub Category name, Brand name, Product code, Product name, Qty Purchased, Color Name, Festival Flag, Festival name, Size name, Gender, Locality Purchased, Age Group, Month, Season, Price, Price Group, Rating. Based on these variables as main factors, the mean ranking analysis can be applied to evaluate the Mean raking analysis of Main Category Wise, Sub Category Wise, Brand Name Wise, Product Name Wise, Color Wise, Festival wise, Gender Wise, Locality Wise, Age Group Wise, Month Wise, Season Wise.

In the Proposed project, machine learning algorithms like K-Nearest Neighbour algorithm, Naïve Bayes Classifier algorithms can be applied for future predictions. Due to today's transition from visiting physical stores to online shopping, predicting customer behaviour in the context of the e-commerce is gaining importance. Predictive analytics to predict user intentions toward a specific product or a category on an e-commerce website is very useful for demand forecasting. Forecasting plays a very important role in the operations of management. It is important and necessary aid to planning and planning is the backbone of effective operations. This demand forecasting serves as the starting point for many activities such as warehousing, shipping, price forecasting and especially, supply planning that aims at fulfilling the demand and requires data on the anticipated need of customers.

The primary objective of this project is to analyse various e-commerce customer behaviour and anticipate the demand for effective supply chain management. This project will be more helpful to identify the needs of the customer. By proper analysis of the data sets we can conclude the customer need.

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## 4.1 CONCLUSION

The project, "Predictive Analysis in E-Commerce for Customer Behavior and Demand Forecasting" is a web-based application which deals with past data gathered as secondary data from web sources. The current programme is mostly used to create future predictions by examining a history dataset of online purchases made by a variety of clients over a period of time.

Machine learning methods such as the K-Nearest Neighbour algorithm and the Naive Bayes Classifier algorithms can be used in the proposed project to make future predictions. Predicting consumer behaviour in the context of e-commerce is becoming increasingly important as people shift from visiting physical businesses to purchasing online. For demand forecasting, predictive analytics may be used to anticipate user intentions toward a given product or category on an e-commerce website. Forecasting is critical to management's day-to-day operations. It is a valuable and required tool for planning, and planning is the foundation of successful operations. This demand forecasting acts as the foundation for a variety of operations, including warehousing, shipping, pricing forecasting, and, most importantly, supply planning, which tries to meet consumer demand and necessitates data on client expectations.

The project's main goal is to examine diverse e-commerce customer behavior and forecast demand for optimal supply chain management. This project will be most beneficial in identifying the customer's wants. We can determine the customer requirements through careful examination of the data sets.

Predicting customer purchasing behaviour is both exciting and challenging. Meeting this challenge in an e-commerce environment demands dealing with a host of challenges that aren't present in traditional industries. The technology of recommender systems has been embraced by e-commerce platforms. This study seeks to give a predictive framework for client purchasing behaviour in the e-commerce context using Market Basket Analysis, Naive Bayes Classifier, and K-Nearest Neighbor algorithm. The computer may return the top n items that that customer is most likely to buy in the future.



# **ANOMALY DETECTION IN CLOUD SERVERS**

A Project Work submitted in partial fulfillment of the requirements  
for the award of the degree of

## **Master of Computer Applications**

to the

**Periyar University, Salem-11**

by

**P.CHANDRU**

**REG.NO:C22PG127CAP001**

**Under the Guidance of**

**Mrs. R.BHARATHI M.Sc., M.Phil.,**



**DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**

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CERTIFICATE

This is to certify that the Project Work entitled "ANOMALY DETECTION IN CLOUD SERVERS" submitted in partial fulfillment of the requirements of the award of the degree of Master of Computer Applications to the Periyar University, Salem is a record of bonafide work carried out by P.CHANDRU Reg.No:C22PG127CAP001 under my supervision and guidance.

Place: Tiruchengode

Date: 06.11.2023

for   
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(Mrs. R.BHARATHI M.Sc., M.Phil.)


[T. GAYATHRI MCA, MPhil)


  
Head of the Department

(Mrs. R.BHARATHI M.Sc., M.Phil.)

Submitted for the Project Viva Voce Examination held on ..... 06.11.2023 .....

  
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External Examiner

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## ABSTRACT

Anomaly detection is an important activity in cloud computing systems because it aids in the identification of odd behaviours or actions that may result in software glitch, security breaches, and performance difficulties. Detecting aberrant resource utilization trends in virtual machines is a typical application of anomaly detection in cloud computing (VMs). Currently, the most serious cyber threat is distributed denial-of-service attacks. The afflicted server's resources and internet traffic resources, such as bandwidth and buffer size, are slowed down by restricting the server's capacity to give resources to legitimate customers.

To recognize attacks and common occurrences, machine learning techniques such as Quadratic Support Vector Machines(QSVM), Random Forest, and neural network models such as MLP and auto encoders are employed. Various machine learning algorithms are used on the optimized NSL-KDD data set to provide an efficient and accurate predictor of network intrusions. In this research, we propose a neural network based model and experiment on various central and spiral arrangements of the features for distinguishing between different types of attack and support our approach of better preservation of feature structure with image representations. The results are analyzed and compared to existing models and prior research. The outcomes of this study have practical implications for improving the security and performance of cloud computing systems, specifically in the area of identifying and mitigating network intrusions.

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# QUALITY SCORE BASED IMAGE CORNER DETECTION

A Project Work submitted in partial fulfillment of the requirements  
for the award of the degree of

## Master of Computer Applications

to the

Periyar University, Salem - 11

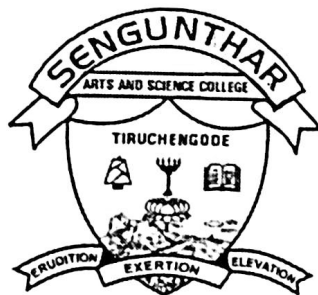
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C22PG127CAP002

Under the Guidance of

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

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TIRUCHENGODE - 637205**

**CERTIFICATE**

This is to certify that the Project Report entitled "QUALITY SCORE BASED IMAGE CORNER DETECTION" submitted in partial fulfillment of the requirements of the award of the degree of Master of Computer Applications to the Periyar University, Salem is a record of bonafide work carried out by **C.DENISH ,C22PG127CAP002** under my supervision and guidance.

Place: Tiruchengode

Date: 06.11.2023

 06/11/23

Signature of the guide  
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 6/11/23

Head of the Department  
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Submitted for the Project Viva Voce Examination held on 06.11.2023

 06/11/23

Internal Examiner

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## ABSTRACT

This project focuses on enhancing the accuracy and reliability of image corner detection through a quality scoring mechanism implemented in Python. We will leverage image processing techniques to detect corners in images and assign quality scores to each detected corner. The scoring system will ensure that only the most significant corners are retained, making this approach valuable for applications like object tracking, image stitching, and feature matching in computer vision. The project aims to provide a comprehensive solution with an easy-to-use interface for users interested in improving their image corner detection tasks.

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Write code to detect corners in the preprocessed images using your selected algorithm (e.g., Shi-Tomasi, Harris, FAST).

## 4.1 Conclusion

The conclusion of a quality score-based image corner detection using Python would typically involve summarizing the findings and insights from your analysis. Here are some points to consider when concluding such a project:

### ➤ Summary of Approach

Describe the methodology you used for corner detection, including any specific algorithms or techniques applied.

### ➤ Quality Score Calculation

Explain how you calculated the quality scores for detected corners. This could involve factors like corner sharpness, repeatability, or stability.

### ➤ Results

Present the results of your corner detection process. Include any visualizations or statistical data that demonstrates the effectiveness of your method.

### ➤ Evaluation

Discuss how well the quality score-based approach performed compared to traditional corner detection methods. You can include quantitative metrics, such as accuracy or precision-recall curves, if applicable.

### ➤ Robustness and Limitations

Highlight any challenges or limitations encountered during the project. This could be related to specific types of images or conditions where the method may not work well.

### ➤ Future Work

Suggest potential improvements or areas for future research. For example, you could discuss enhancements to the quality score calculation or the application of this method to other image processing tasks.

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# **IOT Industry Automation Using Raspberry pi**

A project report submitted in partial fulfillment of the requirements for the award of the degree of

**MASTER OF COMPUTER APPLICATIONS**

to the

**Periyar University, Salem – 11**

By

**C.GOKULAN**

**Reg. No: C22PG127CAP004**

Under the Guidance of

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**PG AND RESEARCH DEPARTMENT OF COMPUTER SCIENCE**

**SENGUNTHAR ARTS AND SCIENCE COLLEGE**

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TIRUCHENGODE – 637 205

CERTIFICATE

This is to certify that the project report entitled “IOT Industry Automation Using Raspberry pi” submitted in partial fulfillment of the requirement for the award of the degree of Master of Computer Application to the Periyar university, Salem is a record of bonafide work carried out by C. GOKULAN, Register No: C22PG127CAP004 under supervision and guidance and that no part of the report has been submitted for the award of any degree or diploma.

Place : Tiruchengode

Date : 6-11-23

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SIGNATURE OF THE GUIDE

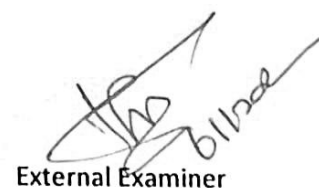
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(Mrs. R.BHARATHI M.Sc., M.Phil.,)

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 6/11/23  
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 6/11/23  
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## ABSTRACT

Industrial automation is very much popular now- a days as it improves profitability, safety and reliability. In industrial automation control, a wide number of process variables such as, temperature, stream, pressure, distance, and fluid levels can be detected all the while. By implementing Raspberry Pi and Embedded web server technology and utilizing local networking standards, industrial parameters can be controlled and checked distantly.

It reduces designing expenses regarding manual arrangements of all involved gadgets. In this project, a system is created which will monitor automatically the industrial applications, the temperature, humidity, gas leakages. Camera is utilized for identifying and alerting from undesirable activities or unauthorized persons including in surrounded region of industry. In the proposed system raspberry pi is utilized as controller and server, python language is utilized to run the prototype.

The Raspberry pi communicates with the Embedded Web Server. When the information is associated with the web server, it will store and give the information at required time. Putty software are utilized for checking and controlling the industrial parameters.

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# **WEATHER FORECASTING SYSTEM IN PYTHON**

A Project Work submitted in partial fulfillment of the requirements for the award of the degree of

## **Master of Computer Applications** to the

**Periyar University, Salem - 11**

**BY**

**S.MUTHU**

**C22PG127CAP005**

**Under the Guidance of**  
**Mrs.T.GAYATHRI MCA., M.Phil.,**



**DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS**

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SENGUNTHAR ARTS AND SCIENCE COLLEGE  
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TIRUCHENGODE - 637205

CERTIFICATE

This is to certify that the Project Report entitled "WEATHER FORECASTING SYSTEM "  
Submitted in partial fulfillment of the requirements of the award of the degree of Master of  
Computer Applications to the Periyar University, Salem is a record of bonafide work carried  
out by S.MUTHU Reg.No C22PG127CAP005 under my supervision and guidance.

Place: Tiruchengode

Date: 06/11/2023


  
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## ABSTRACT

Weather forecasting is one of the most scientifically and technologically challenging problems around the world in the last century. To make an accurate prediction is indeed, one of the major challenges that meteorologists are facing all over the world. To predict the conditions of the atmosphere for a given location, Weather Forecasting is used. Weather forecasting is made by collecting numerous data predicted by very proper understanding of the collected data. Weather simply refers to the condition of air on the earth at given place and time. It is a continuous, data intensive, multidimensional, dynamic and chaotic process. These processes make weather forecasting a formidable challenge.

Forecasting is the process of estimation in unknown situations from the historical data. It is the application of science and technology. Weather forecast is more helpful for people as it predicts how the future weather is going to be and people may plan accordingly. Farmers will be most beneficial one's as they may know the rainfall prediction accordingly. The weather forecast can be done in many ways like using the previous data or analyzing the current clouds.

This proposed application concentrates on weather forecasting with an improved prediction and reliable accuracy. Traditional observations made at the surface of atmospheric pressure, temperature, wind speed, wind direction, humidity, precipitation are collected routinely from trained observers, automatic weather stations or buoys. During the data assimilation process, information gained from the observations is used in conjunction with a numerical model's most recent forecast for the time that observations were made to produce the meteorological analysis. Numerical weather prediction models are computer simulations of the atmosphere. They take the analysis as the starting point and evolve the state of the atmosphere forward in time using understanding of physics and fluid dynamics. The complicated equations which govern how the state of a fluid changes with time require supercomputers to solve them. The output from the model provides the basis of the weather forecast.

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## 4.1.CONCLUSION

In the era of the global warming, research in weather measurement, monitoring and forecasting are become more and more relevant. This research demonstrates the design and implementation of an affordable mini weather monitoring system that ensures flexibility, portability, scalability and user friendly operations which can provide data of some weather variables including temperature, humidity and pressure. With the advancement of technology weather forecasting has developed to its level best, but there is yet to develop, as far as a nature is so unpredictable. Weather forecasts are increasingly accurate and useful, and their benefits extend widely across the economy. While much has been accomplished in improving weather forecasts, there remains much room for improvement. Simultaneously, they are developing new technologies and observational networks that can enhance forecaster skill and the value of their services to their users.

## 4.2.BIBILOGRAPHY

### BOOK REFERENCE

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- [5] Bhatkande, S. S., & Hubballi, R. G. (2016). Weather prediction based on decision tree algorithm using data mining techniques. International Journal of Advanced Research in Computer and Communication Engineering, 5(5), 483-487.

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**RASPBERRY PI PERSONAL CLOUD STORAGE**

A project report submitted in partial fulfillment of the requirements

for the award of the degree of

**MASTER OF COMPUTER APPLICATIONS**

To the

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**TIRUCHENGODE – 637 205.**

**NEV/DEC– 2023**

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**CERTIFICATE**

This is to certify that the project report entitled “RASPBERRY PI PERSONAL CLOUD STORAGE” submitted in partial fulfillment of the requirement for the degree of **Master of computer Application to the periyar university, Salem** is a record of bonafide work carried out by **N.NAGASANJAY** Register No: **C22PG127CAP006** under supervision and guidance and that no part of the report has been submitted for the award of any degree or diploma.

**Place : Tiruchengode**

**Date : 06/11/2023**

  
6/11/23

**SIGNATURE OF THE GUIDE**

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6/11/23

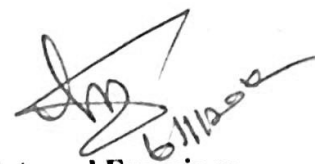
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Submitted for the Viva-voce Examination held on 06/11/2023

  
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## ABSTRACT

The project is developed for user need the personal cloud storage service using Raspberry pi. The purpose of developing the system is to explore the Raspberry pi 3 act as server and open source software for develop it as personal cloud storage services. This project has been done by research the developing it like same information that gain through research and few functions like LINE notify add on it. The system will be offering cloud storage like commercial cloud service that already existing. Personal cloud storage offers for free services, synchronizing devices and sharing content. Personal cloud storage using Raspberry pi allows synchronizing local folder with servers in the cloud with accessing internet. All the process must be done by login into the system. This project also let user to mount USB or external storage and can access through it.

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Thus, technology, objectivity and trust go hand in hand; they all appear simultaneously as a heterogeneous network is reduced, stabilized and made durable. My findings, in Chapter Four and particularly Chapter Five thus suggest that Raspberry Pi cloud storage as a case study of cloud computing is not a completely stabilized technology, though it is well on its way. It is stable enough that users for the most part trust the technology and behave in accordance with its user scripts. However, there is still a concerted effort on the part of Raspberry Pi cloud storage to communicate its objectivity and trustworthiness and to further reduce its heterogeneity and the marginality of some users.

### Diffie Hellman Key Exchange and AES Encryption Algorithm

Cloud computing is the applied predictive technology for the decade. It allows user to store large amount of data in cloud storage and use as and when required, from any part of the world, via any terminal equipment. Since cloud computing is rest on internet, security issues like privacy, data security, confidentiality, and authentication is encountered. In order to get rid of the same, a variety of encryption algorithms and mechanisms are used. Many researchers choose the best they found and use it in different combination to provide security to the data in cloud. On the similar terms, we have chosen to make use of a combination of authentication technique and key exchange algorithm blended with an encryption algorithm.

### CONCLUSION:

The personal cloud storage with Raspberry pi provided a lot benefits such as cloud services without any charges, also user can determine their storage space using their own hard disk and added security features involving encryption. With this security features will ensure all data secure. User can have used hard disk with large space hence user can store the large of data on it. Furthermore, user can access to their personal data from any anywhere with this cloud storage services if access internet. This type of cloud services with using Raspberry pi is just a prototype and it implemented with reasonable price, if there are some features need to add on, for instance enhance usability, security or hardware get damaged. For enhance security, developer need to configure and find suitable like create password on hard disk and Raspberry pi. Hence, it become more secure. Then, Raspberry may get damage because of lifetime.

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