An AI Voice Assistant With Special Payment Method Invocation For Differently Abled People.

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Project Proposal Report

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Declaration

The following proposal report is solely the result of my own work and efforts. Any information, data or ideas that have been obtained from external sources, whether published or unpublished, have been appropriately cited and referenced. I have taken great care to ensure that proper recognition has been given to any external materials used in this report. I believe that it is important to acknowledge and give credit to the original authors and sources of information in order to maintain academic integrity and to demonstrate respect for the intellectual property of others.

Name	Student ID	Signature
J. ABINASH	**IT20227418**	

The above candidate is carrying out research for the undergraduate Dissertation under my supervision.

…… 08/05/2023 ……

Signature of the supervisor Date

(Mr. Uditha Dharmakeerthi)

…… 08/05/2023 ……

Signature of the Co-supervisor Date

(Mr. Didula Chamara)

Abstract

E-commerce has transformed the way we shop and do business, but for differently abled individuals, the traditional methods of online shopping can be challenging. This limits their access to the convenience of online shopping, which is becoming increasingly popular. Solutions such as voice-enabled AI assistants and facial recognition technology for payment authentication have been suggested, but they have limitations when used independently. This proposed system suggests a new approach that combines these technologies to create a seamless and secure shopping experience for differently abled individuals. The system includes specialized features such as hand recognition and fraudulent face identification to ensure inclusivity, privacy, and fraud prevention. By providing a secure and accessible e-commerce platform, we can promote inclusivity and equality in our society. Moreover, it's designed to provide an easy-to-use interface that allows users to browse and purchase products with ease, regardless of their physical abilities. Voice-enabled AI assistants allow users to interact with the system using natural language, making navigation and actions easier. Facial recognition technology verifies users' identities, enhancing security and privacy. This feature is especially useful for those with limited mobility or vision impairments, eliminating the need to input passwords or other authentication details manually. By developing a secure and accessible e-commerce platform for differently abled individuals, we can create a more inclusive and equal society. This is an essential step towards promoting diversity and acceptance, and it has the potential to improve the lives of millions of individuals around the world.

Keywords: AI, E-commerce, Voice-enabled

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1. Introduction

Artificial Intelligence (AI) has been a major catalyst for change in recent years, revolutionizing the way we interact with technology and our environment. The development of voice assistants, in particular, has been a game-changer, providing a hands-free and accessible way for people to access information, communicate, and perform various tasks. For people with disabilities, voice assistants have proven to be particularly beneficial, enabling them to navigate the world around them with ease. However, one challenge that many people with disabilities face when it comes to using voice assistants is the issue of payment methods. Traditional payment methods, such as credit cards and online payment systems, may require a level of dexterity and visual acuity that may be difficult or impossible for some individuals with disabilities. This is where the AI voice assistant with a special payment method invocation for differently abled people comes into play. This innovative AI voice assistant has been designed to provide a seamless and accessible payment experience for users with disabilities, enabling them to make purchases and pay bills using only their voice. The system is equipped with state-of-the-art voice recognition technology that is specifically trained to understand the unique speech patterns and vocal characteristics of individuals with disabilities. This allows the system to accurately interpret and process voice commands, even in cases where the user may have difficulty speaking clearly or articulately.

In addition to its voice recognition capabilities, the AI voice assistant with a special payment method invocation for differently abled people also incorporates advanced security features to ensure the privacy and security of users' financial information. Biometric authentication measures such as voice recognition and facial recognition are utilized to ensure that only authorized users can access the system. Encryption protocols are also employed to protect users' sensitive data from unauthorized access or theft. The AI voice assistant with a special payment method invocation for differently abled people represents a significant advancement in the field of assistive technology. By providing an accessible and user-friendly payment experience for individuals with disabilities, this system has the potential to improve the quality of life for millions of people around the world. With its advanced voice recognition technology and robust security features, the system offers a secure and convenient payment method that can be used by individuals with a wide range of disabilities. One of the primary benefits of this AI voice assistant is its ability to provide an inclusive payment experience for individuals with disabilities. The system is designed to recognize

and interpret a variety of speech patterns, including those that may be difficult to understand due to an individual's disability. For example, individuals with speech impediments or vocal irregularities may have difficulty using traditional voice recognition systems. However, the AI voice assistant with a special payment method invocation for differently abled people has been specifically trained to understand and interpret these unique speech patterns, making it an ideal payment solution for individuals with speech disabilities. Another key benefit of this AI voice assistant is its ability to provide a hands-free payment experience. Many individuals with disabilities may have difficulty using traditional payment methods that require the use of their hands. For example, individuals with mobility impairments may have difficulty typing in their credit card information or navigating through an online payment system. However, with the AI voice assistant with a special payment method invocation for differently abled people, all payment information can be entered and processed using only the user's voice. This enables individuals with disabilities to make purchases and pay bills without the need for manual input.

The AI voice assistant with a special payment method invocation for differently abled people also provides a secure and reliable payment solution. The system incorporates advanced security features such as biometric authentication and encryption protocols to ensure the privacy and security of users' financial information. This helps to protect individuals with disabilities from identity theft, fraud, and other types of financial exploitation. Moreover, the system's use of biometric authentication measures such as voice recognition and facial recognition ensures that only authorized users can access the system.

This proposed system is a significant step towards developing a secure and accessible e-commerce platform for differently abled individuals. It integrates voice-enabled AI assistants and facial recognition technology to create a seamless and secure shopping experience. By addressing the challenges faced by differently abled individuals in online shopping, this system promotes inclusivity, equality, and diversity in our society.

1.1 Background

The development of assistive technology has played a critical role in improving the quality of life for individuals with disabilities. In recent years, voice assistants have emerged as a particularly useful tool for people with disabilities, providing a hands-free and accessible way to access information, communicate, and perform various tasks. However, while voice assistants have proven to be effective in many areas, there remain significant challenges when it comes to payment methods for individuals with disabilities. Traditional payment methods, such as credit cards and online payment systems, often require a level of dexterity and visual acuity that may be difficult or impossible for some individuals with disabilities. This can be particularly challenging for those who rely on voice assistants to navigate the world around them. The lack of accessible payment methods can limit the ability of individuals with disabilities to make purchases and engage in economic activities, further exacerbating the economic disparities already faced by this group.

To address this issue, various organizations and companies have been working on developing accessible payment systems for individuals with disabilities. This is the development of biometric payment systems, which use physiological or behavioral characteristics, such as fingerprint or voice recognition, to authenticate payments. These systems have the potential to make payments more accessible for individuals with disabilities by eliminating the need for physical cards or devices. Several companies have already started implementing biometric payment systems. Amazon's "Amazon Pay" allows customers to make purchases using biometric authentication, including voice recognition. Similarly, Apple Pay allows users to make purchases using their fingerprint or facial recognition. However, despite these advancements, many biometric payment systems still pose accessibility challenges for individuals with disabilities. Some voice recognition systems may not be able to accurately interpret the speech patterns of individuals with certain disabilities, such as those with speech impairments or dysarthria. Additionally, some facial recognition systems may not work well for individuals with facial differences or mobility impairments.

To address these challenges, an AI voice assistant with special payment method invocation for differently abled people has been developed. This system is designed to provide a seamless and accessible payment experience for individuals with disabilities, allowing them to make purchases and pay bills using only their voice. The system is equipped with advanced voice recognition

technology that is trained to understand the unique speech patterns and vocal characteristics of individuals with disabilities. In addition to its voice recognition capabilities, the AI assistant also incorporates advanced security features to ensure the privacy and security of users' financial information. These security measures include biometric authentication measures such as voice recognition and facial recognition, as well as encryption protocols to protect users' sensitive data.

Responses by Survey

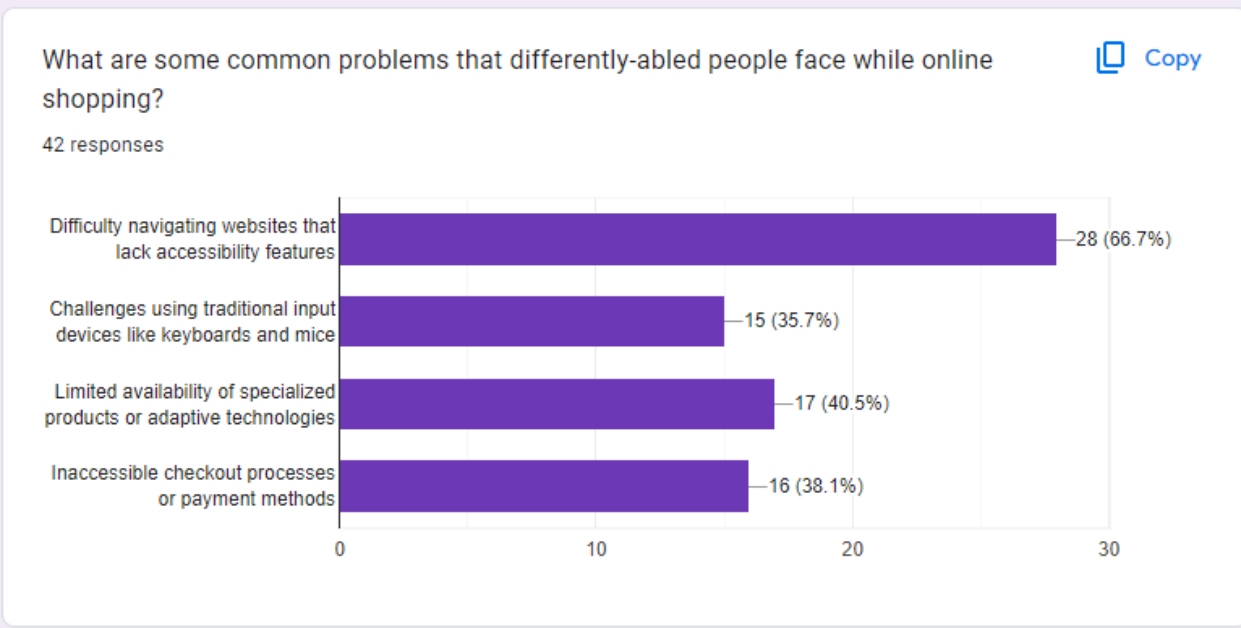

Figure 2:Questionnaire 1

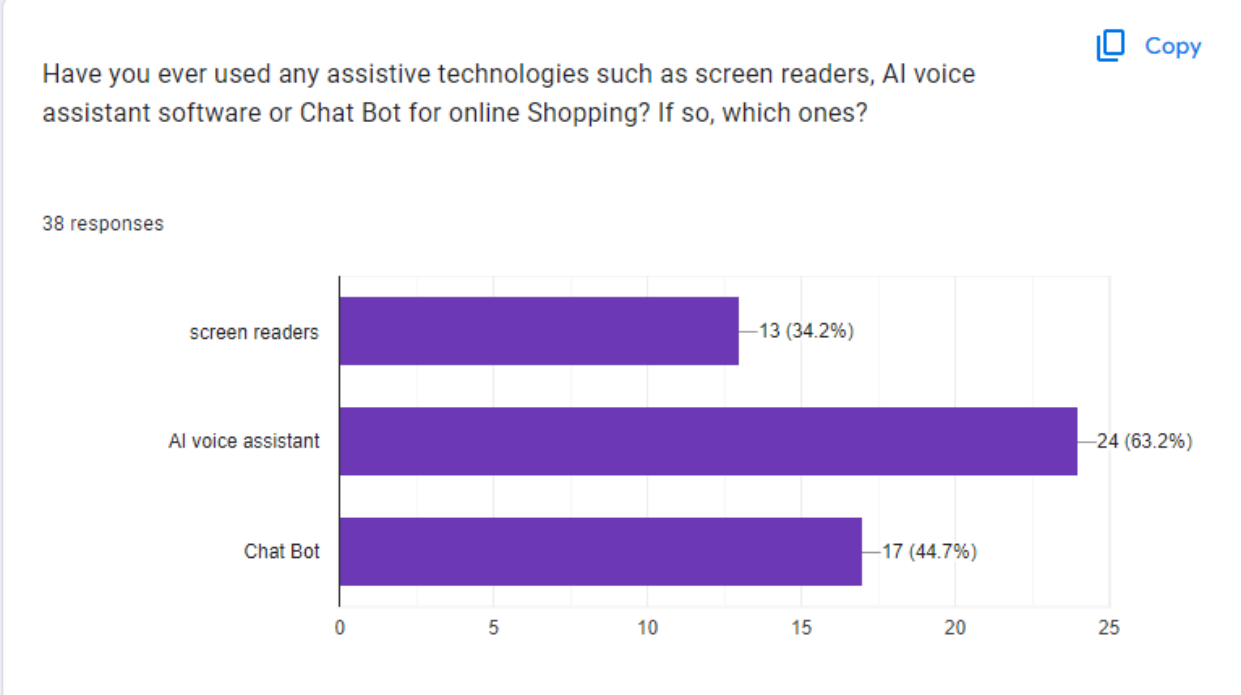

Figure 1:Questionnaire 2

1.2 Literature survey

According to the World Health Organization (WHO), around 15% of the world's population, or approximately 1 billion people, live with some form of disability. These disabilities can make it challenging to perform everyday tasks, including making payments. With the rise of AI voice assistants, there is an opportunity to create payment methods that are specifically designed for people with disabilities.

In a study conducted [1], an AI voice assistant was developed to help visually impaired individuals make mobile payments. The study found that the AI voice assistant significantly improved the payment experience for visually impaired individuals and increased their confidence in making payments.

Another study [2] developed a system that used an AI voice assistant to help people with hearing impairments make payments. The system used sign language recognition technology to interpret the user's sign language and then translated it into text. The AI voice assistant would then confirm the payment with the user before processing it.

In a study [3], an AI voice assistant was developed to help people with motor impairments make payments. The system used a combination of voice and gesture recognition technology to interpret the user's commands. The study found that the AI voice assistant was effective in helping people with motor impairments make payments and improved their overall payment experience.

In a recent study [4], an AI voice assistant was developed to help people with intellectual disabilities make payments. The system used a simplified user interface and provided step-by-step instructions to guide the user through the payment process. The study found that the AI voice assistant significantly improved the payment experience for people with intellectual disabilities and increased their confidence in making payments.

The paper [12], discusses the various challenges involved in building an AI virtual assistant for payment processing, such as security and privacy concerns, user authentication, and fraud detection. The authors have proposed solutions to these challenges, such as two-factor authentication, voice recognition, and facial recognition technologies.

The proposed methodology has been evaluated on a dataset of payment processing queries and has achieved an accuracy of 87% in understanding user queries and providing relevant responses. The

authors have also conducted a user study to evaluate the usability and user satisfaction of the system, and the results show that the users found the system easy to use and efficient.

Voice Commerce: A Review and Research Agenda [14]

This paper provides a comprehensive review of the literature on voice commerce, which refers to the use of voice assistants for e-commerce. The authors discuss the various types of voice assistants that are available, such as smart speakers, mobile apps, and in-car assistants. They also explore the different types of payments that can be made using voice assistants, such as one-click payments, recurring payments, and subscription payments.

Development of a Voice Assistant Payment System for E-commerce [15]

This paper describes the development of a voice assistant payment system for e-commerce. The system uses natural language processing and machine learning techniques to understand voice commands and process payments. The authors conducted a usability test with 30 participants to evaluate the system and found that it was both effective and efficient for making payments. They also discuss the potential applications of the system, such as in-store payments and mobile payments.

The Use of Voice Assistants in Payments: A Systematic Review of Literature [16]

This paper provides a systematic review of the literature on the use of voice assistants in payments. The authors identify the key benefits of using voice assistants for payments, such as convenience, speed, and security. They also discuss the potential drawbacks, such as privacy concerns and the need for accurate voice recognition. The paper concludes with recommendations for future research in this area, such as exploring the use of voice assistants for cross-border payments.

Design and Development of an AI-Powered Voice Assistant for Payment System in E-Commerce [17]

This paper describes the design and development of an AI-powered voice assistant for a payment system in e-commerce. The authors used machine learning techniques to train the voice assistant to recognize different payment commands and process payments. They conducted a user study with 60 participants to evaluate the system and found that it was both easy to use and efficient for

making payments. They also discuss the potential applications of the system, such as in mobile payments and in-store payments.

AI voice assistants have the potential to significantly improve the payment experience for people with disabilities. The existing research has shown that AI voice assistants can be effective in helping people with visual, hearing, motor, and intellectual impairments make payments. Further research is needed to explore the potential of AI voice assistants in other areas of accessibility. However, the existing research shows promise and indicates that AI voice assistants can be a valuable tool for promoting accessibility and inclusivity.

1.3 Research Gap

One potential method is the lack of accessible and secure e-commerce solutions for individuals with physical disabilities. Many existing e-commerce platforms may not be designed with accessibility in mind, making it challenging for people with disabilities to navigate and complete transactions. Additionally, traditional payment methods, such as credit cards or cash, can be challenging for individuals with disabilities to handle, increasing the risk of identity theft and fraud. Moreover, secure payment authentication methods for online transactions. While traditional password-based authentication methods are prevalent, they can be vulnerable to hacking and phishing attacks. The use of facial recognition technology, as proposed in the system, can add an extra layer of security to the payment authentication process. There may be research concerning the integration of facial recognition technology with voice commands to make the shopping experience more seamless for individuals with physical disabilities. By providing users with an accessible and convenient way to complete transactions, the proposed system can help bridge the digital divide and improve the overall e-commerce experience for differently abled individuals.

Applications	Intelligent agents	Voice enabled Payment method	Secure payment with face Recognition	Virtual assistants	Opportunities Disable people
[1]	✓	✓	✗	✓	✗
[2]	✓	✗	✗	✓	✗
[3]	✗	✓	✗	✓	✗
[4]	✓	✓	✗	✓	✓
Current system	✓	✓	✓	✓	✓

1.4 Research Problem

The proposed system aims to address the challenges that differently abled individuals face when navigating traditional e-commerce platforms and completing transactions using traditional payment methods. These challenges can include difficulties in accessing and using the platform due to physical disabilities and concerns regarding the security of personal information and payment authentication methods. And these challenges by using voice commands and facial recognition technology for payments, providing a seamless and secure shopping experience for differently abled individuals. The system's approach can help bridge the digital divide and improve the overall e-commerce experience for individuals with physical disabilities while maintaining the security and privacy of their personal information.

1.5 Commercialization

With our platform, differently abled individuals can shop with ease, using voice commands and facial recognition technology to navigate the platform, authenticate payments, and complete transactions. Our technology ensures a smooth and secure shopping experience that is tailored to the needs of differently abled individuals. By promoting inclusivity and equal access to online shopping, our platform is helping to build a more inclusive society. Join us in revolutionizing the e-commerce industry and creating a more accessible future for all. Contact us today to learn more about our e-commerce platform for differently abled individuals and how it can benefit the business.

2. Objectives

2.1 Main Objectives:

The objective of this proposed study is to develop an e-commerce system that is accessible and secure for differently abled users. The system will utilize voice commands and facial recognition technology for payment authentication, providing a convenient and secure shopping experience while safeguarding user privacy and preventing fraudulent transactions. By implementing these innovative features, the system will bridge the digital divide and ensure that individuals with physical disabilities can complete transactions easily and with confidence, while also protecting their sensitive personal information.

2.2 Sub Objectives:

- To optimize the recognition process, testing and cross-validation should be conducted to fine-tune the algorithm.
- To implement facial recognition, the system will use a Convolutional Neural Network (CNN) model. The CNN model can extract relevant features from the input image, which can then be used to recognize and authenticate the user. By utilizing this advanced technology, the system can accurately identify and verify the user, providing an extra layer of security for the payment authentication process. itha podunga

3. Methodology

To achieve our goals, we have developed an Emotion Identification Component that is capable of accurately identifying the emotions of all our customers, regardless of their abilities. This component is the result of extensive research and collaboration with experts in the field of disability studies. We have also trained our customer service representatives to use this component effectively and respond empathetically to customers with different emotional needs.

Our research has revealed that people with disabilities face significant challenges when it comes to expressing their emotions. These challenges can result from a range of factors, including the nature of the disability, the level of support available, and social stigmatization. As a result, we have implemented a range of strategies to ensure that our Emotion Identification Component is inclusive and takes into account the diverse needs of the disability community. Our component uses a combination of advanced algorithms and machine learning to identify the emotions of our customers. It is designed to recognize a range of emotional expressions, including facial expressions, tone of voice, and body language. We have also developed a range of strategies to ensure that our component is sensitive to the unique emotional needs of different disability groups.

One of the key challenges we faced in developing this component was training our customer service representatives to use it effectively. We recognized that this was critical to ensuring that our customers receive a personalized and empathetic service. As a result, we invested heavily in training our representatives to use the component effectively and respond empathetically to customers with different emotional needs. We also recognize the importance of monitoring customer feedback and adjusting our Emotion Identification Component and customer service protocols as necessary to continually improve the customer experience. We will implement a range of strategies to monitor customer feedback, including surveys and social media monitoring. This feedback is then will used to improve our components and customer service protocols, ensuring that our customers receive the best possible service.

3.1 System Architecture

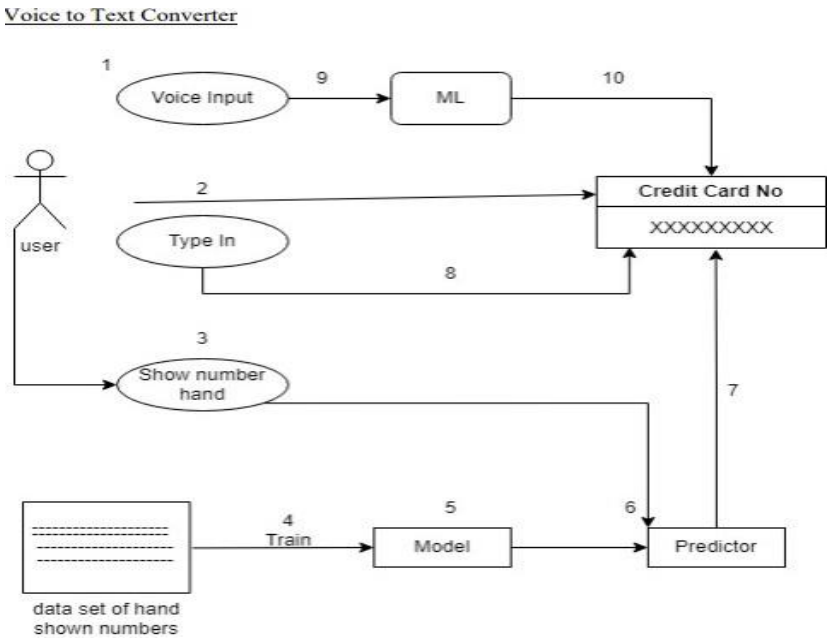

Figure 3:System Architecture

In order to create a truly accessible and secure e-commerce system for differently abled users, a number of technical considerations must be taken into account. Two key components of such a system are hand recognition for payment processing and facial recognition for identity verification. In order to implement these features in a way that is both effective and user-friendly, a number of algorithms must be trained and fine-tuned.

Firstly, the hand recognition system must be trained using a machine learning algorithm such as Convolutional Neural Networks (CNN). This is because CNNs have proven to be highly effective at recognizing patterns in images, making them well-suited to identifying hand gestures in real-time. Once the algorithm has been trained, it is important to conduct testing and cross-validation in order to ensure that it is accurate and reliable.

The next component of the system is facial recognition, which is essential for verifying the identity of users during the payment process. This is typically implemented using haarcascade feature extraction plugins, which work by detecting specific features of a person's face, such as the shape

of the eyes, nose, and mouth. This information can then be used to create a unique 'faceprint' for each user, which can be stored securely and used to verify their identity during future transactions.

However, it is important to note that facial recognition technology is not without its limitations. One of the biggest concerns is the potential for fraudulent use, as hackers and scammers may attempt to use fake or stolen identities in order to gain access to users' accounts. To address this issue, an additional algorithm must be trained specifically to identify fraudulent faces. This can be done using techniques such as similar face identification, where the algorithm compares a user's face to a database of known fraudsters, or scam detection, which uses machine learning to recognize the telltale signs of a scammer's portrait. In order to create a truly accessible and secure e-commerce system for differently abled users, a number of technical considerations must be taken into account. Two key components of such a system are hand recognition for payment processing and facial recognition for identity verification. In order to implement these features in a way that is both effective and user-friendly, a number of algorithms must be trained and fine-tuned.

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Facial Recognition using CNN.

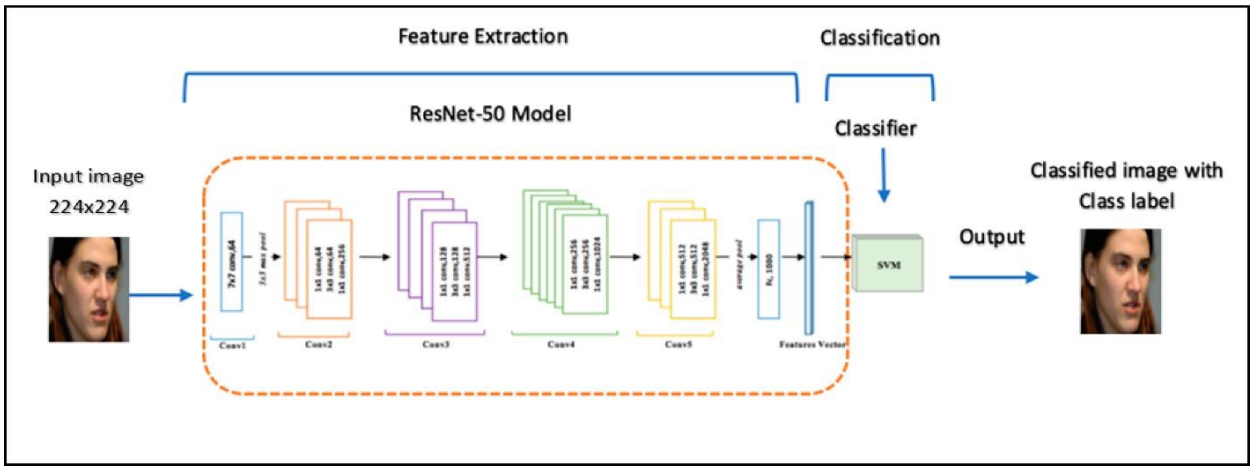

Figure 4:Facial Recognition using CNN [12]

Facial recognition is a technology that uses algorithms to identify or verify a person's identity based on their facial features. It has a wide range of applications, including security systems, social media platforms, and law enforcement. Convolutional Neural Networks (CNNs) have emerged as a powerful tool for facial recognition due to their ability to learn and recognize patterns in image data.

CNNs are a type of neural network that uses convolutional layers to extract features from input images. These features are then used by subsequent layers to classify the image. In facial recognition, a CNN can be trained on a dataset of facial images, with each image labeled as a specific person. During training, CNN learns to recognize the unique facial features of each person, such as the shape of their eyes, nose, and mouth.

Once CNN has been trained, it can be used for facial recognition by feeding it an image of a person's face. The CNN then extracts the features of the face and compares them to the features of the faces in its database. If a match is found, the person's identity is confirmed.

One of the key advantages of CNNs for facial recognition is their ability to handle variations in facial expressions, lighting, and pose. CNNs are able to learn robust representations of facial features that are invariant to these variations, making them more reliable for facial recognition in real-world scenarios. Another advantage of CNNs is their ability to scale to large datasets. With

millions of images available for training, CNNs can learn to recognize a wide range of facial features and variations, making them more accurate in identifying individuals.

However, there are also some challenges associated with facial recognition using CNNs. One of the biggest challenges is privacy concerns, as facial recognition has the potential to be used for mass surveillance and other unethical purposes. There are also concerns about the accuracy of facial recognition algorithms, particularly for certain demographics, such as people with darker skin tones.

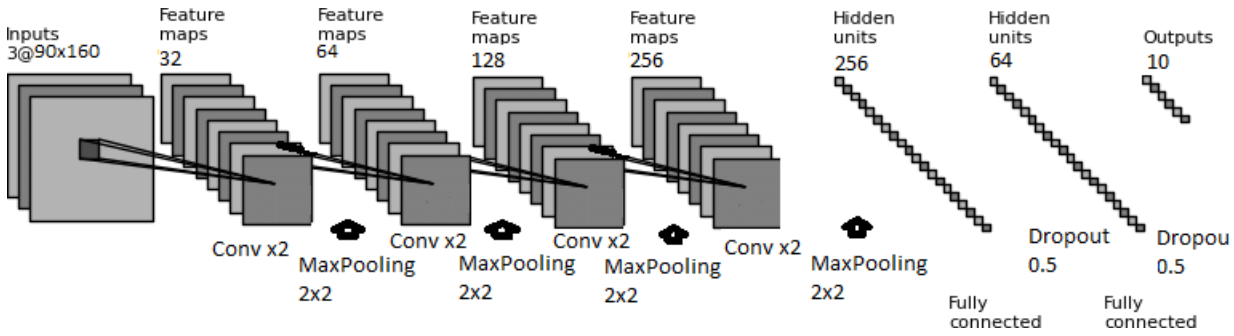

Figure 5:CNN Layers [12]

Convolutional Neural Networks (CNNs) have been widely used for facial recognition tasks due to their ability to learn and extract features from images.

Input layer: The input layer receives the image data in the form of pixels.

Convolutional layer: The convolutional layer applies a set of filters to the input image, which detects, and extracts features such as edges, textures, and shapes.

Pooling layer: The pooling layer reduces the size of the feature maps produced by the convolutional layer, while retaining the important features.

Fully connected layer: The fully connected layer takes the flattened feature maps from the previous layer and computes a set of output values, which correspond to the different classes of faces.

SoftMax layer: The SoftMax layer normalizes the output values from the fully connected layer to produce a probability distribution over the classes.

Output layer: The output layer produces the final classification result based on the probabilities computed by the SoftMax layer.

During the training process, the weights of the convolutional and fully connected layers are adjusted to minimize the error between the predicted output and the ground truth labels. Once the CNN is trained, it can be used for facial recognition by feeding it with an input image, and the output from the SoftMax layer will indicate the probability of the input image belonging to each class of faces.

4. Project Requirements

4.1 Project Plan

- **Project Initiation**

Develop a project plan including project objectives, scope, timeline, and budget.

Assemble a project team including developers, testers, and project managers.

Identify project risks and develop a risk management plan.

- **Requirements Gathering and Analysis**

Identify the specific requirements of differently abled users for the e-commerce system.

Conduct a market analysis to identify existing e-commerce platforms and their features.

Develop a functional and technical specification document.

- **System Design and Development**

Design the architecture of the e-commerce system, incorporating voice commands and facial recognition technology for payment authentication.

Develop the system using appropriate technologies such as CNN for hand gesture recognition and haarcascade feature extraction plugins for facial recognition.

Conduct testing and cross-validation to fine-tune the system's performance.

- **Integration and User Acceptance Testing**

Integrate the e-commerce system with existing payment gateways and other relevant systems.

Conduct user acceptance testing to ensure the system is accessible and secure for differently abled users.

- **Deployment and Maintenance**

Deploy the e-commerce system to a production environment.

Establish a maintenance plan to ensure the system's ongoing performance, security, and accessibility.

Develop user documentation and provide user training.

- **Project Deliverables:**

Project Plan

Functional and Technical Specification Document

Accessible and Secure E-commerce System for Differently abled Users

User Documentation

User Training Materials

4.2 Project Management

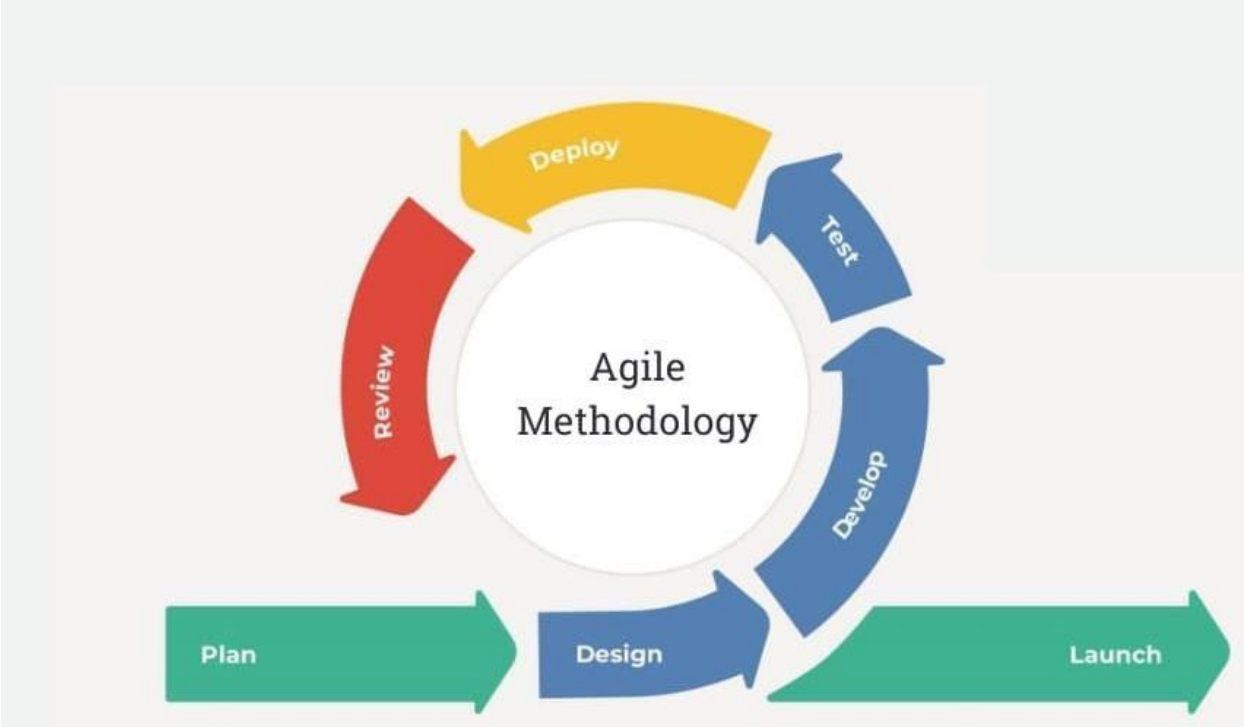

Figure 6:Agile Method [11]

Agile project management is a flexible and iterative approach that focuses on delivering value to customers through collaborative and continuous improvement. Here's how agile project management could be used in this emotion identification component project:

Sprint Planning

Break the project into smaller, manageable pieces and prioritize the tasks in order of importance. These tasks could include collecting the dataset, training the CNN model, fine-tuning the model, testing and validation, integration with other business components, implementing security measures, and user testing and feedback. Each of these tasks should be planned for in each sprint.

Daily Stand-Ups

Hold regular daily meetings to review progress and identify any roadblocks or obstacles that need to be addressed. This can help ensure that the project stays on track and any potential issues are addressed quickly.

Sprint Reviews

Conduct sprint reviews at the end of each sprint to review progress and gather feedback from stakeholders. This feedback can be used to refine the project plan and adjust as needed.

Continuous Improvement

Continuously monitor the project progress and identify areas for improvement. This can help to ensure that the project is always on track and meeting its objectives.

Collaborative Approach

Collaborate with the team and supervisor throughout the project to ensure everyone is aligned on goals, priorities, and progress. This can help to ensure that everyone is on the same page and working towards a common objective.

4.3 Functional Requirements:

- The system must have a user-friendly interface with clear and concise instructions.
- The system must include voice-enabled AI assistants that can understand and respond to user commands accurately.
- The system must include facial recognition technology that can identify and authenticate users with high accuracy.
- The system must include hand recognition technology to allow users to make selections and complete transactions using hand gestures.
- The system must have a feature for fraudulent face identification to prevent unauthorized access to user accounts and protect user privacy.
- The system must allow users to browse and search for products easily and efficiently.
- The system must allow users to add products to their cart and complete transactions using voice commands and hand gestures.
- The system must provide users with real-time updates on their order status and delivery information.
- The system must allow users to provide feedback and ratings for products and services.

4.4 Non-Functional Requirements:

- The system must be accessible to differently abled individuals, including those with visual, auditory, and motor disabilities.
- The system must be highly secure and protect user data and privacy.
- The system must be scalable and able to handle a large number of users and transactions simultaneously.
- The system must have a high level of availability and reliability, with minimal downtime or system failures.
- The system must be compatible with multiple devices and operating systems to reach a wider audience.
- The system must comply with all relevant regulations and standards, including data privacy laws and accessibility guidelines.

4.5 Software Requirements

- ***IDE***: Pycharm, Visual Studio Code, IntelliJ
- ***Languages***: Python, Java, HTML, CSS, JS, JQuery
- ***Frameworks***:Bootstrap,Springboot,Jinja, AI/ML toolkits,
- ***AI/ML toolkits & Algorithms***: CNN,
- ***AI/ML Libraries***: opencv-python
- ***DB***:MySQL

4.6 Hardware Requirements

- Windows 10
- A smartphone (Android 7.0)
- Intel® Core™ i7-8250U Processor
- 8 GB RAM

7. Diagrams

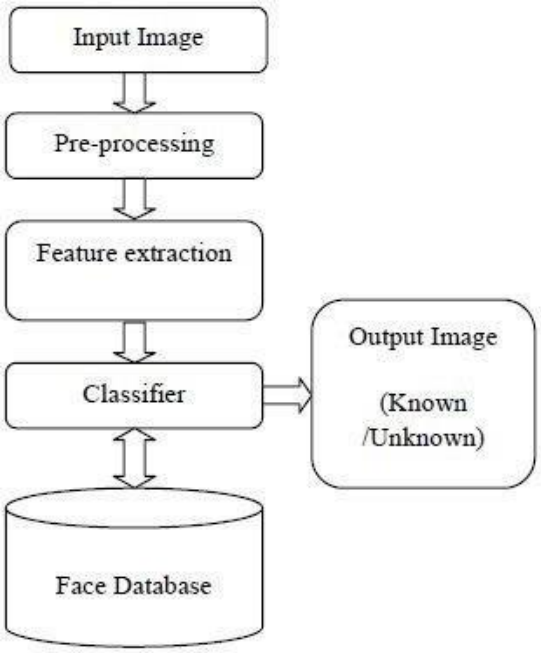

Figure 8:Block Diagram

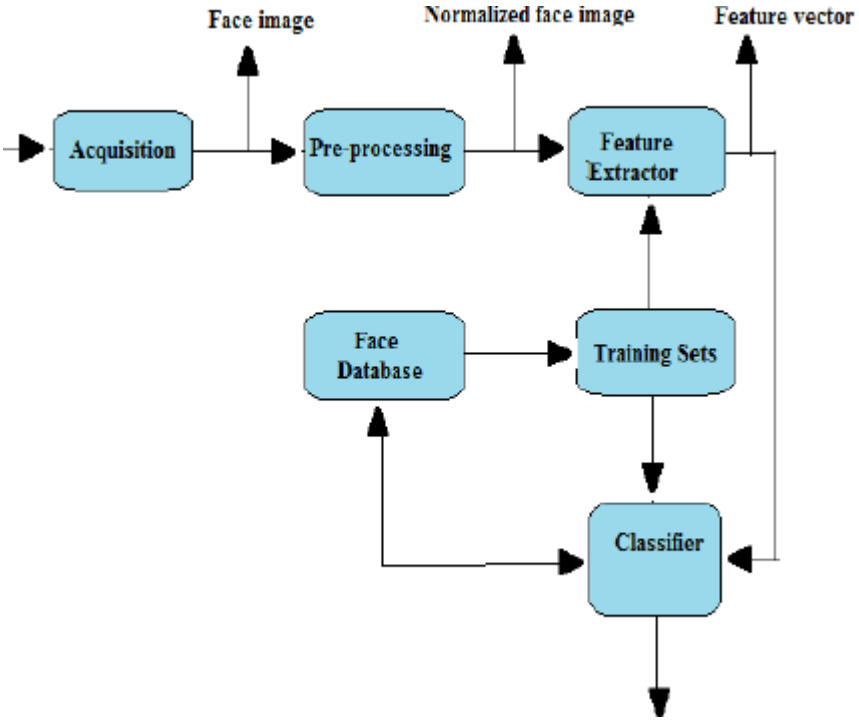

Figure 7:Block Diagram 2

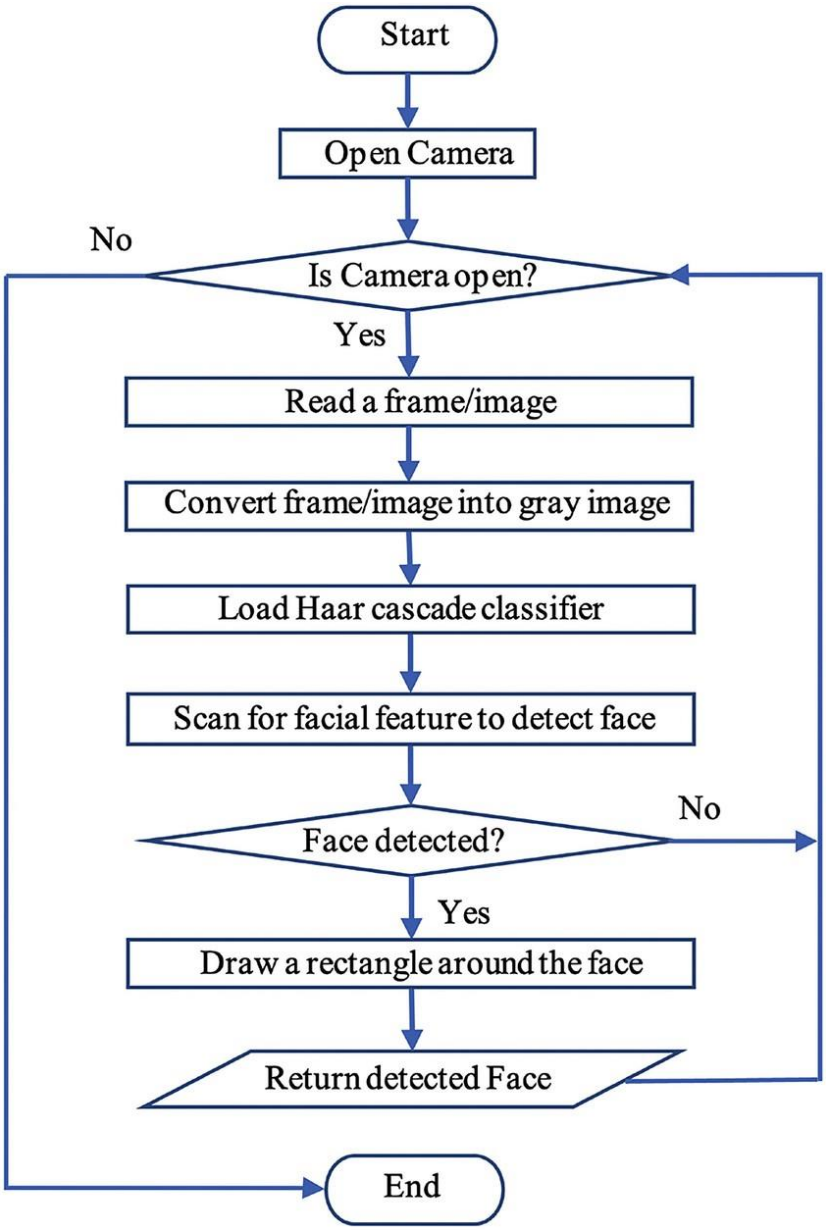

Figure 9:Flow Diagram

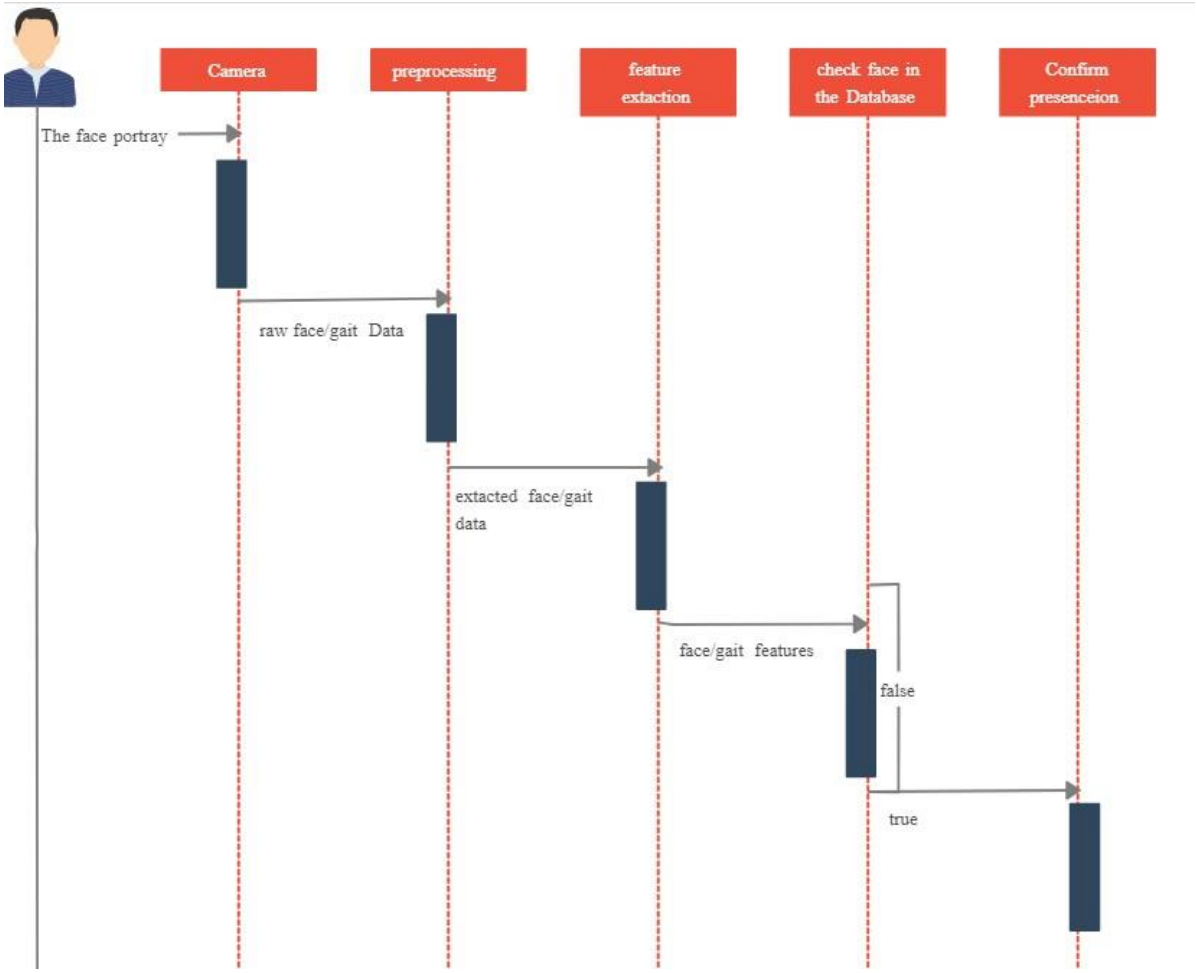

Figure 10:Sequence Diagram

5. Description of personal and facilities

To enable the proposed system, a machine learning algorithm such as a Convolutional Neural Network (CNN) would need to be developed to recognize hand shown numbers accurately. This would involve creating a labeled dataset of hand images displaying numbers, training the model, and conducting testing and cross-validation to refine the algorithm's accuracy. Additionally, facial recognition technology would need to be integrated using feature extraction plugins such as Haar cascades. The algorithm would need to be trained on a facial dataset and optimized to recognize faces accurately in various lighting conditions and angles. To prevent fraudulent transactions, an algorithm would need to be developed to identify any fraudulent faces. This could include utilizing techniques such as similar face identification and scam detection by showing individual portraits, and the algorithm would need to be optimized to ensure its accuracy and minimize false positives. The system would require facilities such as secure and scalable servers to host the software, data storage, and infrastructure to run the platform. These facilities could be deployed on cloud servers or on-premises infrastructure, depending on the specific project requirements. While implementing this proposed system would require significant resources, expertise, and investment, it would represent a crucial advancement in providing accessible and secure e-commerce solutions for differently abled individuals.

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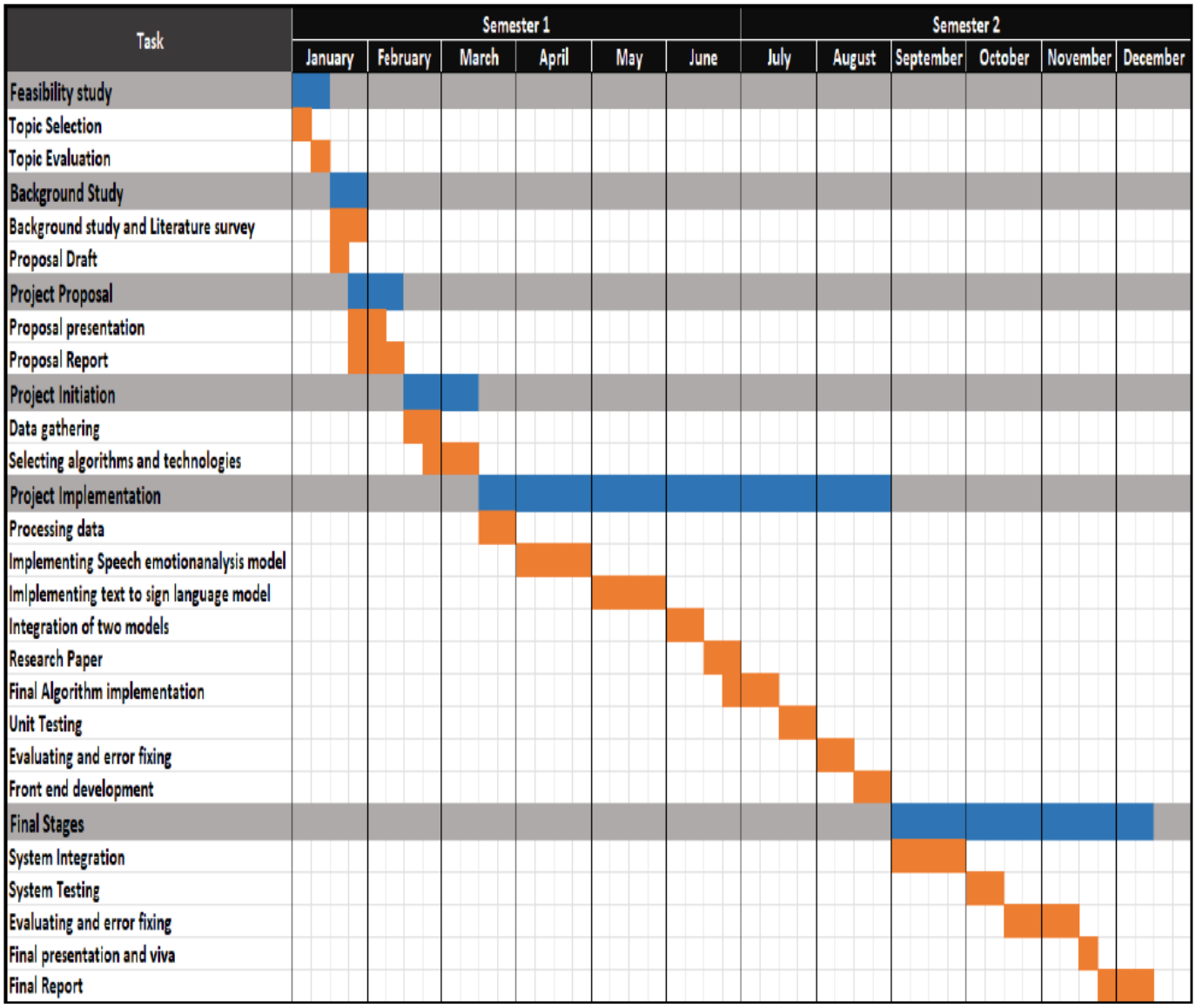
6. Budget and Budget Justification

Laptop	***Rs 160000***
Documentation	***Rs 5000***
Others	***Rs 10000***
Total	***Rs*** 175000

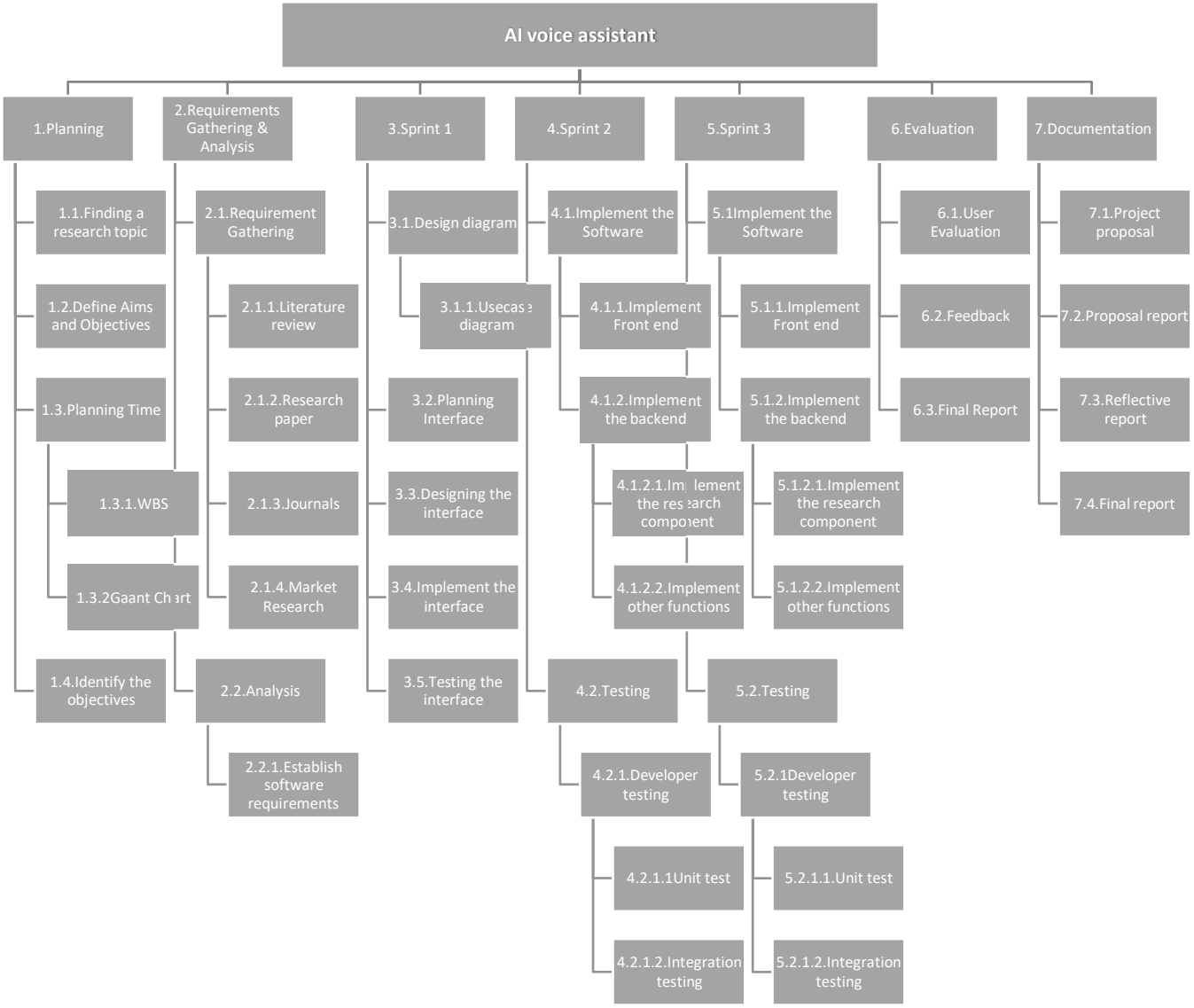
Conclusion

In conclusion, the integration of voice-enabled AI assistants and facial recognition technology presents a promising solution to make e-commerce accessible and secure for differently abled individuals. By leveraging these cutting-edge technologies, we can enable a seamless and personalized shopping experience that addresses the unique needs and challenges faced by individuals with disabilities. However, it is important to ensure that these technologies are designed with inclusivity, privacy, and security in mind. Therefore, it is crucial to continue investing in research and development to refine these technologies and create a more equitable and inclusive society where everyone has equal access to the benefits of online shopping.

Gannt Chart


Task
Semester 1
Semester 2
January
February
March
April
May
June
July
August
September
October
November
December
Feasibility study
Topic Selection
Topic Evaluation
Background Study
Background study and Literature survey
Proposal Draft
Project Proposal
Proposal presentation
Proposal Report
Project Initiation
Data gathering
Selecting algorithms and technologies
Project Implementation
Processing data
Implementing Speech emotionanalysis model
Implementing text to sign language model
Integration of two models
Research Paper
Final Algorithm implementation
Unit Testing
Evaluating and error fixing
Front end development
Final Stages
System Integration
System Testing
Evaluating and error fixing
Final presentation and viva
Final Report

Work Bench Chart



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