# UNIVERSITY OF MYSORE



## MYSORE –570019, Karnataka INTERNSHIP REPORT

#### ON

“VISION”

## BACHELOR OF COMPUTER APPLICATION

***Submitted by:***

**SYED SAAD AHMED**

**BC180578**



Conducted at

### COMPSOFT TECHNOLOGIES

# C:\Users\ASUS\Downloads\vidya-vikas-first-grade-college-mysore-logo.jpg

# VIDYA VIKAS FIRST GRADE COLLEGE

**Department of Computer Application**

**Bannur Road, Alanahally Mysore**

# 



**CERTIFICATE**

This is to certify that the Internship titled **“VISION”** carried out by **Mr Syed Saad Ahmed,** a bonafide student of Vidya Vikas First Grade College, in partial fulfillment for the award of **Bachelor of Computer Application**, under University Of Mysore. It is certified that all corrections/suggestions indicated have been incorporated in the report.

The project report has been approved as it satisfies the academic requirements in respect of Internship prescribed for the course Internship / Professional Practice (BC180578)

#### Signature of Guide Signature of HOD Signature of Principal

**External Viva:**

Name of the Examiner Signature with Date

1)

2)

# D E C L A R A T I O N

I, **Syed Saad Ahmed**, student of BCA, Vidya Vikas First Grade College-570019, declare that the Internship has been successfully completed, in **Compsoft Technologies**. This report is submitted in partial fulfillment of the requirements for award of Bachelor Degree in BCA, during the academic year 2022-2023.

Date : :

Place : Mysore

USN :BC180578

NAME : Syed Saad Ahmed

**OFFER LETTER**

**Date: 5th February, 2023**

**Name: Syed Saad Ahmed**

**USN: BC180578**

**Dear Student,**

**We would like to congratulate you on being selected for the Machine Learning with Python (Research Based) Internship position with Compsoft Technologies, effective Start Date 5th February, 2023, All of us are excited about this opportunity provided to you!**

**This internship is viewed as being an educational opportunity for you, rather than a part-time job. As such, your internship will include training/orientation and focus primarily on learning and developing new skills and gaining a deeper understanding of concepts of Machine Learning with Python (Research Based) through hands-on application of the knowledge you learn while you train with the senior developers. You will be bound to follow the rules and regulations of the company during your internship duration.**

**Again, congratulations and we look forward to working with you!.**

**Sincerely,**

**Nithin K. S**

**Project Manager**

**Compsoft Technologies**

**No. 363, 19th main road,**

**1st Block Rajajinagar**

**Bangalore - 560010**

# A C K N O W L E D G E M E N T

This Internship is a result of accumulated guidance, direction and support of several important persons. We take this opportunity to express our gratitude to all who have helped us to complete the Internship.

We express our sincere thanks to our Principal, for providing us adequate facilities to undertake this Internship.

We would like to thank our Head of Dept – branch code, for providing us an opportunity to carry out Internship and for his valuable guidance and support.

We would like to thank our (Lab assistant name) Software Services for guiding us during the period of internship.

We express our deep and profound gratitude to our guide, Guide name, Assistant/Associate Prof, for her keen interest and encouragement at every step in completing the Internship.

We would like to thank all the faculty members of our department for the support extended during the course of Internship.

We would like to thank the non-teaching members of our dept, forhelping us during the Internship.

Last but not the least, we would like to thank our parents and friends without whose constant help, the completion of Internship would have not been possible.

**NAME :**

**Syed Saad Ahmed**

**USN :BC180578**

# ABSTRACT

1. **The field of artificial intelligence has led to various virtual assistants such as Siri in iPhone, Google Assistant, Microsoft Cortana, and so on.**
2. **Even after such progression, very little has been done to implement these technologies to assist the visually impaired community. Recognizing a person or distinguishing an object, these tasks are straightforward for common people but can be very difficult for people that are partly or completely blind.**
3. **Their lives can be made smoother by assisting them to detect what is present in front of them at that instant.**
4. **We aim to develop a system/assistant that will serve to guide a visually impaired person and will indicate the person by speaking through the earpiece.**
5. **The system will help the person recognize people, add new faces and detect objects that are in their vicinity. We will have a mobile application that will consist of numerous deep learning models that will help applications increase their administration.**
6. **The primary working of the system will consist of the camera**

**continuously feeding images for inputs, the core system processing this input information and the earpiece acting as the output device to provide this output to the user.**

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# COMPANY PROFILE

## A Brief History of Compsoft Technologies

Compsoft Technologies, was incorporated with a goal ”To provide high quality and optimal Technological Solutions to business requirements of our clients”. Every business is a different and has a unique business model and so are the technological requirements. They understand this and hence the solutions provided to these requirements are different as well. They focus on clients requirements and provide them with tailor made technological solutions. They also understand that Reach of their Product to its targeted market or the automation of the existing process into e-client and simple process are the key features that our clients desire from Technological Solution they are looking for and these are the features that we focus on while designing the solutions for their clients.

Sarvamoola Software Services. is a Technology Organization providing solutions for all web design and development, MYSQL, PYTHON Programming, HTML, CSS, ASP.NET and LINQ. Meeting the ever increasing automation requirements, Sarvamoola Software Services. specialize in ERP, Connectivity, SEO Services, Conference Management, effective web promotion and tailor-made software products, designing solutions best suiting clients requirements.

Compsoft Technologies, strive to be the front runner in creativity and innovation in software development through their well-researched expertise and establish it as an out of the box software development company in Bangalore, India. As a software development company, they translate this software development expertise into value for their customers through their professional solutions.

They understand that the best desired output can be achieved only by understanding the clients demand better. Compsoft Technologies work with their clients and help them to defiine their exact solution requirement. Sometimes even they wonder that they have completely redefined their solution or new application requirement during the brainstorming session, and here they position themselves as an IT solutions consulting group comprising of high caliber consultants.

They believe that Technology when used properly can help any business to scale and achieve new heights of success. It helps Improve its efficiency, profitability, reliability; to put it in one sentence ” Technology helps you to Delight your Customers” and that is what we want to achieve.

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1. **ABOUT THE COMPANY**



Compsoft Technologies is a Technology Organization providing solutions for all web design and development, MYSQL, PYTHON Programming, HTML, CSS, ASP.NET and LINQ. Meeting the ever increasing automation requirements, Compsoft Technologies specialize in ERP, Connectivity, SEO Services, Conference Management, effective web promotion and tailor-made software products, designing solutions best suiting clients requirements. The organization where they have a right mix of professionals as a stakeholders to help us serve our clients with best of our capability and with at par industry standards. They have young, enthusiastic, passionate and creative Professionals to develop technological innovations in the field of Mobile technologies, Web applications as well as Business and Enterprise solution. Motto of our organization is to “Collaborate with our clients to provide them with best Technological solution hence creating Good Present and Better Future for our client which will bring a cascading a positive effect in their business shape as well”. Providing a Complete suite of technical solutions is not just our tag line, it is Our Vision for Our Clients and for Us, We strive hard to achieve it.

## Products of Compsoft Technologies.

**Android Apps**

It is the process by which new applications are created for devices running the Android operating system. Applications are usually developed in Java (and/or Kotlin; or other such option) programming language using the Android software development kit (SDK), but other development environments are also available, some such as Kotlin support the exact same Android APIs (and bytecode), while others such as Go have restricted API access.

The Android software development kit includes a comprehensive set of development tools. These include a debugger, libraries, a handset emulator based on QEMU, documentation, sample code, and zutorials. Currently supported development platforms include computers running Linux (any modern desktop Linux distribution), Mac OS X 10.5.8 or later, and Windows 7 or later. As of March 2015, the SDK is not available on Android itself, but softwaredevelopment is possible by using specialized Android applications.

**Web Application**

It is a client–server computer program in which the client (including the user interface and client- side logic) runs in a web browser. Common web applications include web mail, online

retail sales, online auctions, wikis, instant messaging services and many other functions. web applications use web documents written in a standard format such as HTML and JavaScript,which are supported by a variety of web browsers. Web applications can be considered as a specifific variant of client–server software where the client software is downloaded to the client machine when visiting the relevant web page, using standard procedures such as HTTP. The Client web software updates may happen each time the web page is visited. During the session, the web browser interprets and displays the pages, and acts as the universal client for any web application. The use of web application frameworks can often reduce the number of errors in a program, both by making the code simpler, and by allowing one team to concentrate on the framework while another focuses on a specifified use case. In applications which are exposed to constant hacking attempts on the Internet, security- related problems can be caused by errors in the program.

Frameworks can also promote the use of best practices such as GET after POST. There are some who view a web application as a two-tier architecture. This can be a “smart” client that performs all the work and queries a “dumb” server, or a “dumb” client that relies on a “smart” server. The client would handle the presentation tier, the server would have the database (storage tier), and the business logic (application tier) would be on one of them or on both. While this increases the scalability of the applications and separates the display and the database, it still doesn‟t allow for true specialization of layers, so most applications will outgrow this model. An emerging strategy for application software companies is to provide web access to software previously distributed as local applications. Depending on the type of application, it may require the development of an entirely different browser-based interface, or merely adapting an existing application to use different presentation technology. These programs allow the user to pay a monthly or yearly fee for use of a software application without having to install it on a local hard drive. A company which follows this strategy is known as an application service provider (ASP), and ASPs are currently receiving much attention in the software industry.

Security breaches on these kinds of applications are a major concern because it can involve both enterprise information and private customer data. Protecting these assets is an important part of any web application and there are some key operational areas that must be included in the development process. This includes processes for authentication, authorization, asset handling, input, and logging and auditing. Building security into the applications from the beginning can be more effective and less disruptive in the long run.

**Web design**

It is encompasses many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design; interface design; authoring, including standardized code and proprietary software; user experience design; and

search engine optimization. The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and if their role involves creating mark up then they are also expected to be up to date with web accessibility guidelines. Web design partially overlaps web engineering in the broader scope of web development.

## Departments and services offered

Compsoft Technologies plays an essential role as an institute, the level of education, development of student’s skills are based on their trainers. If you do not have a good mentor then you may lag in many things from others and that is why we at Compsoft Technologies gives you the facility of skilled employees so that you do not feel unsecured about the academics. Personality development and academic status are some of those things which lie on mentor’s hands. If you are trained well then you can do well in your future and knowing its importance of Compsoft Technologies always tries to give you the best.

They have a great team of skilled mentors who are always ready to direct their trainees in the best possible way they can and to ensure the skills of mentors we held many skill development programs as well so that each and every mentor can develop their own skills with the demands of the companies so that they can prepare a complete packaged trainee.

## Services provided by Compsoft Technologies.

* Core Java and Advanced Java
* Web services and development
* Dot Net Framework
* Python
* Selenium Testing
* Conference / Event Management Service
* Academic Project Guidance
* On The Job Training
* Software Training

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1. **INTRODUCTION**

## Introduction to ML

* Machine learning is programming computers to optimize a performance criterion using example data or past experience . We have a model defined up to some parameters, and learning is the execution of a computer program to optimize the parameters of the model using the training data or past experience. The model may be predictive to make predictions in the future, or descriptive to gain knowledge from data.
* The field of study known as machine learning is concerned with the question of how to construct computer programs that automatically improve with experience

## Problem Statement

* Virtual Assistant provides the feature of providing answers to a particular question from a given text of data, thus now the user does not have to read the entire text to figure out the answer, he/she has to simply input the question, the software will find out the answer from the text data on itself using machine learning.
* The software also provides a summary of the text using machine learning, so the user doesn't have to read the entire thing and thus making it easy to access the website. Thus, using machine learning and speech to text techniques we make the task of accessing the website, which was earlier difficult Now super easy, quick and efficient. Thus, we believe that virtual assistants for the visually impaired are the beginning of Web 3.0

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**4. SYSTEM ANALYSIS**

## Existing System

## Windows 11

## RAM 4GB

## Hard Disk 1TB

## VS Code

## Proposed System

## Pentium 200-MHz

## 128 MB of RAM recommended

* **Linux 7.1 or Windows xp/7/8/10 or any operating system**
* **Any IDE(VS Code recommended)**

## Objective of the System

## A thorough Theoretical analysis of the topic is required & recommended

## Use of VSCode is recommended (although the use of any other IDE is okay)

## Documentation is the key in research

# [CHAPTER](https://1.bp.blogspot.com/-dODuK8N5h1Q/Wlnyb3V9HFI/AAAAAAAACL4/WxQtCJ1pM5wccDABg4wIrTBUB0vlikXQQCLcBGAs/s1600/poly1.jpg) 5 REQUIREMENT ANALYSIS

**5. REQUIREMENT ANALYSIS**

## Hardware Requirement Specification

* NVIDIA graphics card with CUDA Compute Capability version 3.5 to 8.6. See the list of [CUDA-enabled GPU cards](https://developer.nvidia.com/cuda-gpus). A minimum of 8 GB of GPU memory is recommended for optimal performance, particularly when training deep learning models.
* [NVIDIA GPU driver](https://www.nvidia.com/Download/index.aspx?lang=en-us) version: Windows 461.33 or higher, Linux 460.32.03 or higher.
* A CPU with the Advanced Vector Extensions (AVX) instruction set. In general, any CPU after 2011 will contain this instruction set.
* Intel CPUs are recommended, though not required. They have an optimized Intel Machine Learning library that offers performance gains for certain Machine Learning algorithms.

## Software Requirement Specification

* Windows 7/10/11 for Smooth Accessing and running the code
* Visual studio code or any IDE for Debugging etc
* FrameWorks for Specific code like TensorFlow ,Python etc

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1. **DESIGN & ANALYSIS**

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1. **IMPLEMENTATION**

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification. It involves careful planning, investigation of the current system and it constraints on implementation, design of methods to achieve the change over and an evaluation of change over methods a part from planning.

Two major tasks of preparing the implementation are education and training of the users and testing of the system. The more complex the system being implemented, the more involved will be the system analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition is carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

## TESTING

The testing phase is an important part of software development. It is the Information zed system will help in automate process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied. Software testing is carried out in three steps:

1. The first includes unit testing, where in each module is tested to provide its correctness, validity and also determine any missing operations and to verify whether the objectives have been met. Errors are noted down and corrected immediately.
2. Unit testing is the important and major part of the project. So errors are rectified easily in particular module and program clarity is increased. In this project entire system is divided into several modules and is developed individually. So unit testing is conducted to individual modules.
3. The second step includes Integration testing. It need not be the case, the software whose modules when run individually and showing perfect results, will also show perfect results when run as a whole.

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* 1. **SNAPSHOTS**

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* 1. **CONCLUTION**

The package was designed in such a way that future modifications can be done easily. The following conclusions can be deduced from the development of the project:

* Automation of the entire system improves the efficiency
* It provides a friendly graphical user interface which proves to be better when compared to the existing system.
* It gives appropriate access to the authorized users depending on their permissions.
* It effectively overcomes the delay in communications.
* Updating of information becomes so easier
* System security, data security and reliability are the striking features.
* The System has adequate scope for modification in future if it is necessary.

# REFERENCE