

BGIET

TechnoCrat

Year 2023-24

**"Setting goals
is the first step
in turning the
invisible into the
visible."**

Tony Robbins



**BHAI GURDAS INSTITUTE OF ENGINEERING
& TECHNOLOGY, SANGRUR**

Message



Dr. Guninderjit Singh Jawandha
Chairman
Bhai Gurdas Group of Institutions

From Chairman Desk

I am delighted to have the opportunity to release "TECHNOCRAT", the annual college magazine.

In this era of cut throat competition, apart of study. one needs to have the holistic development of personality & this is our prerogative to chisel your thinking & persona here. The

magazine will act as a platform for your creativity & writing aptitude & I intently believe that you would have an all round development of your personality during your sojourn in this temple of learning.

I congratulate the Director, staff & students for publishing "TECHNOCRAT. I hope this issue would be meaningful, enjoyable & memorable in achieving its objectives.

Dr. Gurinderjit Singh Jawandha

Chairman

Bhai Gurdas Group Of Institutions

Message



(Prof) Dr. Tanuja Srivastava
Director BGIET

From Director's Desk

It is a matter of great pleasure for me to learn that Editorial Board is bringing out an issue of the College magazine 'TECHNOCRAT'. I would like to appreciate those who have contributed articles for the college magazine as this shows the hard work, and the hidden potential of the students.

I hereby congratulate those who contributed for the college magazine and welcome those who want to avail the opportunity next time.

(Prof) Dr. Tanuja Srivastava
Director



**Dr. AJAY GOYAL (H.O.D)
IT DEPTT.**

From Head of Department Desk

I am happy that department of IT is publishing yet another issue of “TECHNOCRAT 2023” This magazine is by the student & for the Students. It aims at providing a platform to the students to explore their latent Capabilities & talent, to express their creativity and to develop their technical skills As you scan through the pages of the magazine, It will enlighten you with the important milestone the department has achieved this year. Beside, Our budding talent have expressed their thoughts, ideas, hopes, feelings, aspirations & Convictions in a creative way.

I Congratulate the editorial board for unleashing the hidden potential of the students & appreciate them for their effort in bringing out their issue.

**Dr. AJAY GOYAL (HOD)
IT DEPTT.**

Vision of the Department:

To be a leading the modern technology that provides an innovative education to create leaders and developers, and bring about new knowledge for society and industry.

Mission of the Department:

1. To provide an education that transforms students through creative work and by providing an understanding of the needs of society and industry.
2. To explore the India and the World through greatness in scientific and technical education and research.
3. To serve as a valuable resource for industry and society and remain a source of pride for all Indians.
4. To make globally qualified graduates having imaginative skills and moral values keeping quickness with ever-changing technological advancements in the Information Technology.

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- What is SaaS?
- Robotic Process Automation
- Human Computer Interaction
- Augmented Reality
- Java Ring

TECHNOCRAT

A technocrat is a scientist, engineer, or other expert who is one of a group of similar people who have political power as well as technical knowledge.

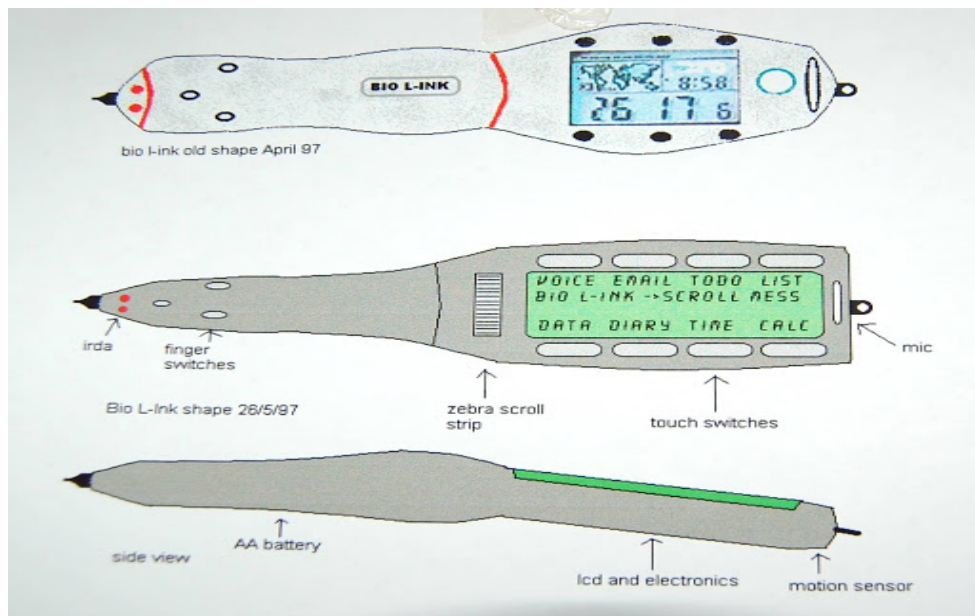
Student Editors

Kunal Singh(2002046)/ 7th Sem

Harsh Maishra (2002037)/ 7th Sem

An Overview of Smart Quill

Smart Quill measures the movement of pen and then matches them to the movements that produce the words and letters programmed into its memory. It is a bit larger than an ordinary fountain pen. By pushing a button on the pen and writing what the user would like to enter, users can enter information and it does not necessarily need a screen. This technology has the ability to read handwriting not only on paper but on any horizontal or vertical flat surface. There is a three-line screen for reading the information stored in the pen. The users might also scroll down the screen by slightly tilting the pen.



Advantages

- i. Smart Quill can read on any flat surface and not only on paper.
- ii. Smart Quill is protected by password.
- iii. It is portable and highly convenient.
- iv. With modems, printers etc it can be linked.

Disadvantages

- i. Smart Quill has accelerometer errors.
- ii. People with hand tremors have inconvenience with it.
- iii. It has a size bigger than a normal pen.
- iv. Due to the thermal variations in the spring errors are introduced in the system.

What is SaaS?

Software as a service (or SaaS) is a way of delivering applications over the Internet—as a service. Instead of installing and maintaining software, you simply access it via the Internet, freeing yourself from complex software and hardware management.

SaaS applications are sometimes called Web-based software, on-demand software, or hosted software. Whatever the name, SaaS applications run on a SaaS provider's servers. The provider manages access to the application, including security, availability, and performance.

SaaS Characteristics

- SaaS Multi-Tenant Architecture
- Easy Customisation with SaaS
- Better Access From Network Devices
- SaaS Harnesses the Consumer Web



Robotic Process Automation



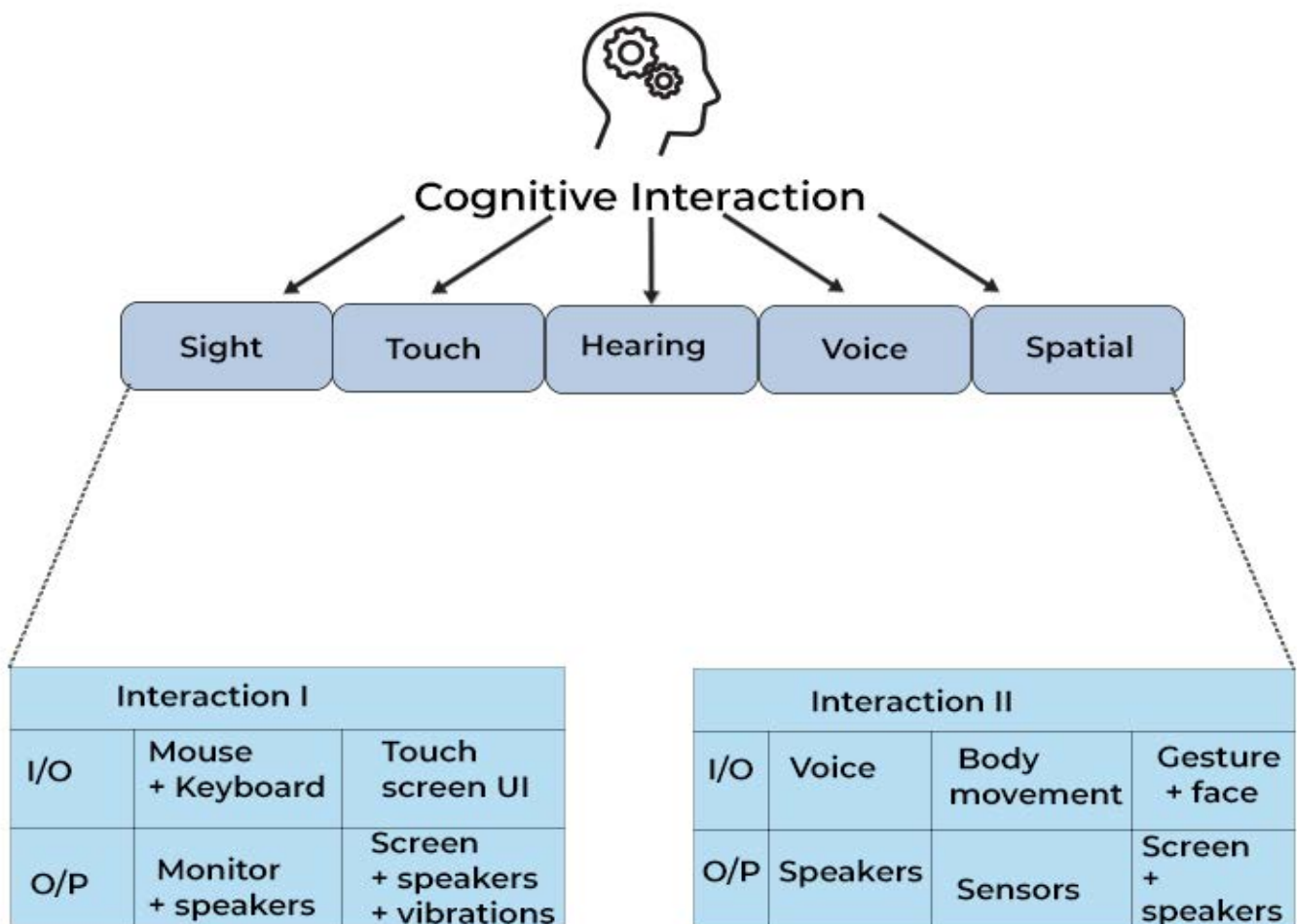
Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. Just like people, software robots can do things like understand what's on a screen, complete the right keystrokes, navigate systems, identify and extract data, and perform a wide range of defined actions. But software robots can do it faster and more consistently than people, without the need to get up and stretch or take a coffee break.



Human Computer Interaction

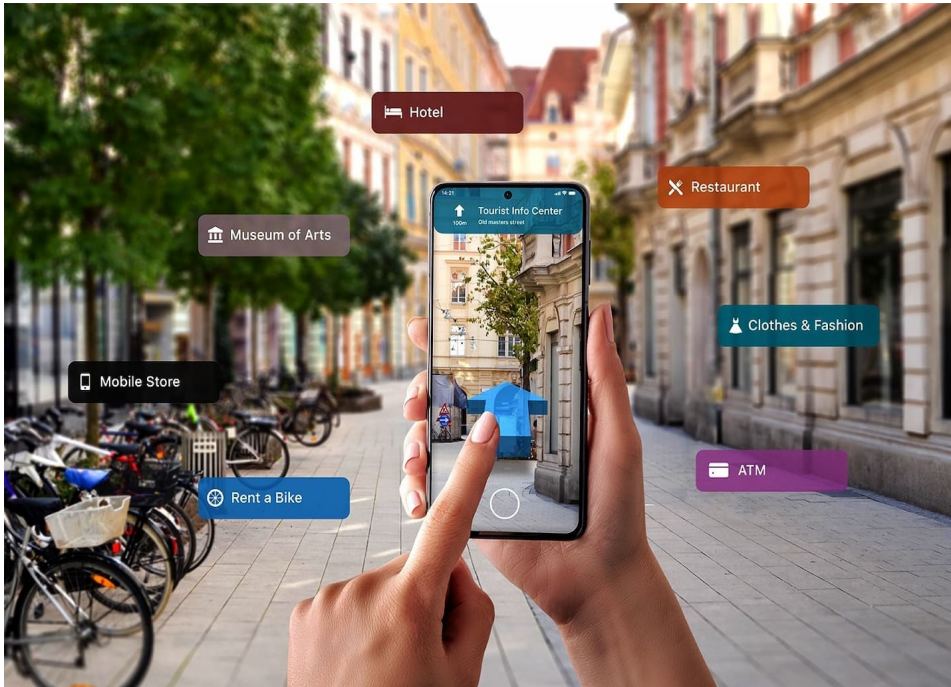
HCI is crucial in designing intuitive interfaces that people with different abilities and expertise usually access. Most importantly, human-computer interaction is helpful for communities lacking knowledge and formal training on interacting with specific computing systems.

HUMAN-COMPUTER INTERACTION



Human-computer interaction (HCI) is the field of study that focuses on optimizing how users and computers interact by designing interactive computer interfaces that satisfy users' needs. It is a multidisciplinary subject covering computer science, behavioral sciences, cognitive science, ergonomics, psychology, and design principles.

Augmented Reality



Augmented reality is largely synonymous with mixed reality. There is also overlap in terminology with extended reality and computer-mediated reality.

Augmented reality is used to enhance natural environments or situations and offers perceptually enriched experiences. With the help of advanced AR technologies (e.g., adding computer vision, incorporating AR cameras into smartphone applications, and object recognition) the information about the surrounding real world of the user becomes interactive and digitally manipulated. Information about the environment and its objects is overlaid on the real world. This information can be virtual. Augmented Reality is any experience which is artificial and which adds to the already existing reality.

Java Ring

Java Ring is a finger ring that is made of stainless steel. It is 0.6 inches in radius. It contains an iButton that contains a processor that has 1 million transistors. It is a data storage device that uses the Java Technology. It can be easily worn on the fingers and be used for authentication of the person wearing it and can even be used to store data and also electronic cash. Although it is named as Java Ring, the module can also be attached to a necklace, wallet or bracelet, and other similar articles. The specifications of the ring include a RAM of 134 KB, a ROM of 32KB, a clock, and a Java Virtual Machine JVM.

Java Ring has 6 components.

Java Virtual Machine (JVM).

RAM.

ROM.

Real-Time Clock.

iButton.

Blue Dot Receptor.

