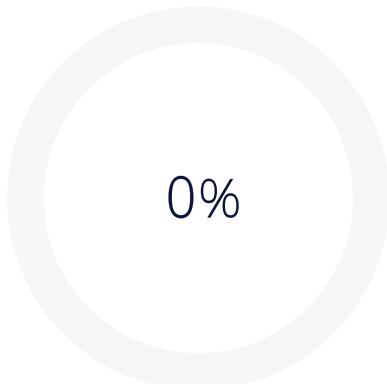


Analysis Report

Plagiarism Detection and AI Detection Report

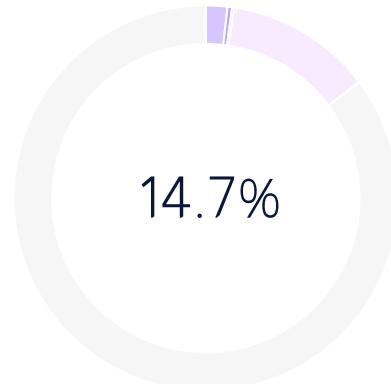
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Plagiarism Detection



Plagiarism Types	Text Coverage	Words
Identical	0%	0
Minor Changes	0%	0
Paraphrased	0%	0
Excluded		
Omitted Words	0	

AI Detection



Text Coverage	Words
AI Text	14.7%
Low Frequency	184
Medium Frequency	39
High Frequency	19
Human Text	85.3%
Excluded	
Omitted Words	0

Plagiarism

0%

Results (0)

*Results may not appear because the feature has been disabled.

 Repository	 Internal Database	 Filtered / Excluded
0	0	0
 Internet Sources	 AI Source Match	 Current Batch
0	0	0

Plagiarism Types	Text Coverage	Words
 Identical	0%	0
 Minor Changes	0%	0
 Paraphrased	0%	0
Excluded		
 Omitted Words		0

About Plagiarism Detection

Our AI-powered plagiarism scans offer three layers of text similarity detection: Identical, Minor Changes, and Paraphrased. Based on your scan settings we also provide insight on how much of the text you are not scanning for plagiarism (Omitted words).

Identical

One to one exact word matches. [Learn more](#)

Minor Changes

Words that hold nearly the same meaning but have a change to their form (e.g.“large” becomes“largely”). [Learn more](#)

Paraphrased

Different words that hold the same meaning that replace the original content (e.g. ‘large’ becomes ‘big’) [Learn more](#)

Omitted Words

The portion of text that is not being scanned for plagiarism based on the scan settings. (e.g. the ‘Ignore quotations’ setting is enabled and the document is 20% quotations making the omitted words percentage 20%) [Learn more](#)

Copyleaks Internal Database

Our Internal Database is a collection of millions of user-submitted documents that you can utilize as a scan resource and choose whether or not you would like to submit the file you are scanning into the Internal Database. [Learn more](#)

Filtered and Excluded Results

The report will generate a complete list of results. There is always the option to exclude specific results that are not relevant. Note, by unchecking certain results, the similarity percentage may change. [Learn more](#)

Current Batch Results

These are the results displayed from the collection, or batch, of files uploaded for a scan at the same time. [Learn more](#)

AI Content

14.7%



About AI Detection

Our AI Detector is the only enterprise-level solution that can verify if the content was written by a human or generated by AI, including source code and text that has been plagiarized or modified. [Learn more](#)

AI Text

A body of text that has been generated or altered by AI technology.

[Learn more](#)

Human Text

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CopyLeaks AI Detector Effectiveness

Credible data at scale, coupled with machine learning and widespread adoption, allows us to continually refine and improve our ability to understand complex text patterns, resulting in over 99% accuracy—far higher than any other AI detector—and improving daily. [Learn more](#)

Ideal Text Length

The higher the character count, the easier for our technology to determine irregular patterns, which results in a higher confidence rating for AI detection. [Learn more](#)

Reasons It Might Be AI When You Think It's Not

The AI Detector can detect a variety of AI-generated text, including tools that use AI technology to paraphrase content, auto-complete sentences, and more. [Learn more](#)

User AI Alert History

Historical data of how many times a user has been flagged for potentially having AI text within their content. [Learn more](#)

AI Logic

The number of times a phrase was found more frequently in AI vs human text is shown according to low, medium, and high frequency. [Learn more](#)

AI Logic

Shows you the “why” behind AI detection with sources you can see and verify.

AI Phrases

Detects phrases that appear with higher frequency in AI-written text than in human writing.

The frequency of a phrase in AI vs. human text.

5 x  58x

58x data security and privacy

How frequently the phrase was found in our dataset:

AI Text	819.12 / 1,000,000 Documents
Human Text	14.15 / 1,000,000 Documents

55x AI Systems for

How frequently the phrase was found in our dataset:

AI Text	91.29 / 1,000,000 Documents
Human Text	1.67 / 1,000,000 Documents

55x AI Systems for

How frequently the phrase was found in our dataset:

AI Text	91.29 / 1,000,000 Documents
Human Text	1.67 / 1,000,000 Documents

50x the diverse perspectives

How frequently the phrase was found in our dataset:

AI Text	307.64 / 1,000,000 Documents
Human Text	6.17 / 1,000,000 Documents

43x AI systems that

How frequently the phrase was found in our dataset:

AI Text	267.62 / 1,000,000 Documents
Human Text	6.17 / 1,000,000 Documents

38x of clear goals

How frequently the phrase was found in our dataset:

AI Text	52.52 / 1,000,000 Documents
Human Text	1.38 / 1,000,000 Documents

34x interviews will be conducted with

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30x to empower users

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AI Text	131.31 / 1,000,000 Documents
Human Text	4.35 / 1,000,000 Documents

28x combination of qualitative

How frequently the phrase was found in our dataset:

AI Text	131.31 / 1,000,000 Documents
Human Text	4.72 / 1,000,000 Documents

28x and respectful care

How frequently the phrase was found in our dataset:

AI Text	40.02 / 1,000,000 Documents
Human Text	1.45 / 1,000,000 Documents

27x and support systems.

How frequently the phrase was found in our dataset:

AI Text	834.12 / 1,000,000 Documents
Human Text	31.35 / 1,000,000 Documents

26x societal and cultural

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Human Text	12.48 / 1,000,000 Documents

24x Belonging and Social

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AI Text	26.26 / 1,000,000 Documents
Human Text	1.09 / 1,000,000 Documents

24x to recognize and address

How frequently the phrase was found in our dataset:

AI Text	197.59 / 1,000,000 Documents
Human Text	8.27 / 1,000,000 Documents

24x Testing and Refinement

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Human Text 4.93 / 1,000,000 Documents

24x technology and ethics,

How frequently the phrase was found in our dataset:

AI Text 70.03 / 1,000,000 Documents

Human Text 2.98 / 1,000,000 Documents

20x and preferences in

How frequently the phrase was found in our dataset:

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Human Text 18.14 / 1,000,000 Documents

19x smart systems that

How frequently the phrase was found in our dataset:

AI Text 26.26 / 1,000,000 Documents

Human Text 1.38 / 1,000,000 Documents

18x an AI System:

How frequently the phrase was found in our dataset:

AI Text 296.38 / 1,000,000 Documents

Human Text 16.91 / 1,000,000 Documents

17x and smart home

How frequently the phrase was found in our dataset:

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Human Text 16.62 / 1,000,000 Documents

17x comprehensive and sustainable

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17x for Autistic Individuals

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AI Text 38.77 / 1,000,000 Documents

Human Text 2.25 / 1,000,000 Documents

17x for Autistic Individuals

How frequently the phrase was found in our dataset:

AI Text 38.77 / 1,000,000 Documents

Human Text 2.25 / 1,000,000 Documents

17x for autistic individuals

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AI Text 38.77 / 1,000,000 Documents

Human Text 2.25 / 1,000,000 Documents

16x remains safe and

How frequently the phrase was found in our dataset:

AI Text 171.33 / 1,000,000 Documents

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16x learning models are

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15x project benefits from

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14x what users need,

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13x establishing a sense of

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13x Lovely Professional University

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12x easy for users to

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12x to Sustainable Development Goals

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10x is holistic and

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Human Text	8.64 / 1,000,000 Documents

10x to achieve their objectives

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Human Text	13.57 / 1,000,000 Documents

10x help can make

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9x connections within the

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9x to: Artificial Intelligence

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9x aim to capture the

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9x set new standards in

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9x the project team will

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8x Mental and emotional health

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AI Text	391.42 / 1,000,000 Documents
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8x Executive Summary The

How frequently the phrase was found in our dataset:

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8x safety features to

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Human Text	17.05 / 1,000,000 Documents

8x within the UN's global

How frequently the phrase was found in our dataset:

AI Text	393.93 / 1,000,000 Documents
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7x the design specifications,

How frequently the phrase was found in our dataset:

AI Text	90.04 / 1,000,000 Documents
Human Text	12.85 / 1,000,000 Documents

7x are always changing and

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AI Text	55.02 / 1,000,000 Documents
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7x role in our lives

How frequently the phrase was found in our dataset:

AI Text	201.34 / 1,000,000 Documents
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7x of the unpredictable

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6x advancement in technology,

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AI Text	251.36 / 1,000,000 Documents
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6x daily life. This

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6x healthy and enjoyable

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6x crucial information for

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6x with their surroundings

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6x and defending against

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Human Text	9.14 / 1,000,000 Documents

6x feel more confident and

How frequently the phrase was found in our dataset:

AI Text	132.56 / 1,000,000 Documents
Human Text	23.15 / 1,000,000 Documents

6x emotional instability and

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6x It points out that

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5x organizations focus on

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5x During this phase, the

How frequently the phrase was found in our dataset:

AI Text	131.31 / 1,000,000 Documents
Human Text	24.24 / 1,000,000 Documents

5x in a way that supports

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AI Text	86.29 / 1,000,000 Documents
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5x better control over

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5x Key Objectives of

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5x **these changes by**

How frequently the phrase was found in our dataset:

AI Text	80.04 / 1,000,000 Documents
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5x **through this initiative,**

How frequently the phrase was found in our dataset:

AI Text	88.79 / 1,000,000 Documents
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5x **or issues with**

How frequently the phrase was found in our dataset:

AI Text	123.81 / 1,000,000 Documents
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Cover Page

Project Title: SenseAble: Smart IoT and AI Systems for Enhancing Daily Living for Autistic Individuals

Submitted to: Artificial Intelligence Medical and Engineering Researchers Society

Principal Investigator: Dr. Arun Malik

Co-Investigator Name: Dr. Isha Batra

Institution: Lovely Professional University

Date: 28/5/2025

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1. Project Title
2. Executive Summary
3. Background and Objectives.
4. Methodology
5. Expected Outcomes
6. Budget Estimate

1. Project Title

SenseAble: Smart IoT and AI Systems for Enhancing Daily Living for Autistic Individuals

2. Executive Summary

The project by the SenseAble Initiative behaves in a way that supports one of AIMERS major goals of ensuring the comprehensive and sustainable wellbeing of all. When there is so much focus on advances in technology and ethics, SenseAble is known for its kindness to those on the autism spectrum. SenseAble, unlike traditional medicine, but including the goals of safety, comfort and opportunities, wants to redefine health and achieve the limit of its maximum effect. Instead of simply meaning the absence of a disease or illness, health should also ensure people feel empowered, respected, have some power and are members of a group. SenseAble organizations focus on these life basics for autistic people, helping to ensure new technology is always carefully designed for people.

a. Empowerment and Everyday Autonomy

A major factor in wellness is being autonomous which involves choosing for yourself, feeling confident to get around and taking control over your emotions and senses as needed. The struggle for an autistic child in traditional school occurs because there are numerous and frequent barriers to their independence. Strong sensory stimuli, trouble with language and insufficient help can seriously reduce a person's independence. SenseAble aims to help users maintain or grow their independence as their environment adapts in real time. You may carry out these changes by turning down the lights, using comforting transitions between activities or giving soft or subtle verbal prompts during a demanding social situation. You manage your money on your own, as SenseAble does not involve any third parties. The idea of helping older adults move toward independence rather than dependence, supports the AIMERS' aim of comprehensive wellness. Mental and emotional health issues relate to establishing a sense of independence, self-respect, firmness and dignity for the individual.

b. Safety and Emotional Well-being

You can't achieve basic holistic health if you don't feel safe. Because of the unpredictable environment, people with autism can face both serious emotional challenges and physical threats. Aversive environments may lead to anxiety or meltdowns and confusing language in emergencies may endanger individuals. SenseAble solves these problems by adding simple but powerful safety features to the environment. Such sensors help watch out for initial stress, sensory overload or issues with behavior and they can instantly inform caregivers or take necessary action. In case of emergency, auditory alarms may be changed to visuals or a sense of touch that brings up

crucial information for people. By making spaces better and safer, SenseAble helps achieve AIMERS goals for systemic health, not just during emergencies, but by supporting patients through preventative and respectful care and defending against negative emotional experiences.

c. Community Belonging and Social Inclusion

This domain is holistic and counts as a whole; individuals build a healthy and meaningful life together. Being embedded in the community plays a vital role in our lives and helps us build well-being. The lack of complete educational, occupational, societal and cultural participation for autistic individuals is a problem. SenseAble improves the inclusion of people with disabilities in society and at their jobs with the use of adaptive technology. As it removes sensory and communication stressors, the project enables more access to other places without such barriers. Through SenseAble, people are encouraged to take classes, workers can access the workplace and everyone is welcome at community activities. Given that AIMERS is focused on social health such results are especially important. It points out that good mental health is as much about being part of a group as it is about personal feelings. Helping autistic people move about society in common places encourages community kindness, fairness and strength.

d. Alignment respect to Sustainable Development Goals

Because the mission of AIMERS has been confirmed through this initiative, the initiative also fits well within the UN's global sustainable development goals (SDGs). Among these global targets we find: focusing on mental and physical health, supporting inclusion, equal rights and making life better for all.

SDG 3 deals with Good Health and Well-being.

The tool encourages mental health by introducing crisis prevention, calming oneself down and making it easy to step away from stress and cope independently.

SDG 4 refers to Quality Education.

Knowing that educators write the key to success for learners on the autism spectrum, SenseAble works to make teachers friendly and accessible for everyone.

SDG 10: Make Inequalities Fewer

SenseAble is involved in removing inequalities as it works to ensure all-inclusive public spaces, education and work for those on the autism spectrum.

As a result, SenseAble aspires to demonstrate that useful innovation can point the organization toward addressing important humanitarian issues, ensuring no person is left behind as the world develops.

e. Ethical Innovation and Participatory Research

What encourages SenseAble in its R&D work is the strong values for ethics and people shown by AIMERS. Rather than a top-down plan, SenseAble listens to participant research and involves autistic people, their families and advocates in every stage of the system's co-design. As a result, all solutions consider the needs and cultures of individuals in the autistic community in depth. It supports research that brings together abilities from multiple educational fields – valuable contributions made without deepening existing inequalities among those involved.

SenseAble's goals are clear: they share their results, data and tools openly to benefit the public, instead of seeking fame or financial gain inside the research community. Open science makes knowledge accessible to people outside the project, meaning SenseAble-like approaches help drive new ideas, inform rules and encourage change.

f. Building a Compassionate, Inclusive Society

The initiative is still largely removed from bringing smart technologies forward. It tries to enable an environment where autistic individuals can avoid tough environments and instead experience environments that happily include them. As a result of AIMERS emphasis on finding healthy, enduring solutions, uplifting dignity and empowering people, SenseAble is fully engaged. It joins the power of technology with the needs of people so that all types of innovation are accessible.

Driven by user needs and ethics, with free exchange of knowledge and actual outcomes, SenseAble supports those who need health, education and community inclusion, making it a fine example of what AIMERS try to achieve.

3. Background and Objectives

It is truly remarkable that the SenseAble project is filling a need for special technologies that provide full inclusion for people on the spectrum. Even though more is known about autism and neurodiversity, places like houses, schools and jobs often favor neurotypical individuals. Because of strong preferences for sensory, communication and other areas, Autistic individuals must regularly face challenges when in public and other environments. To provide this solution, SenseAble is reforming spaces to change in response to users' needs, rather than having users fit the spaces.

A good example is the use of IoT sensors and AI algorithms which SenseAble plans to use to boost the lives of autistic individuals. They watch for things in a user's surroundings that might trigger them, adjust them so that the user can function better on their own and ensure comfort and emotional control. Beyond this, SenseAble thinks about how these spaces could be there for

people daily which means that passive spaces could become strong allies helping with challenges throughout someone's life.

a. Personalized, Adaptive Spaces

SenseAble Studies mainly aims to create place-environments that respond and adapt to an individual's senses, feelings and habits of communication. There are no two autistic people whose needs are the same. For certain, sound is so painful they prefer a calm atmosphere; for others, it's light that hurts and they want a room without bright visuals. We absolutely need to recognize that there is so much diversity among us.

There will be IoT devices paired with SenseAble that collect information about health and behavior, together with sensors to measure the amount of noise, lighting and temperature. Behaviors will be regularly monitored using artificial intelligence. Clues of sensory intensity, anxiety growth or sudden emotional changes will be looked for and interpreted regularly.

Because of this data, the system can instantly and automatically adjust the right environment conditions for plants.

- Overhead lights are switched off when a user appears to find them too dazzling.
- Levels of ambient sound will fall down as stress rises.
- You will see or feel different signs when it's time to use calming strategies.
- Staying at a normal temperature in your environment improves both your body and mind.

SenseAble is designed to stop crises from getting worse. SenseAble maintains conditions that are always changing and unique for each user, before any problems are seen.

b. Empowering Autonomy and Comfort

Taking part in the SenseAble project, autistic individuals hope to gain better control over the devices and tools that affect their surroundings. These models ask support workers, therapists or teachers to be ready to recognize and address any sensory problems. At the same time such help can make it harder for the person to act independently or decide on their own.

SenseAble believes in the use of self-regulating smart systems that call for less outside assistance. You can manage the system by letting it run fully automatically or by changing settings yourself with a mobile phone or wearable. As a result, people can control their lives and decide things for themselves, feel more confident and keep their dignity. By using SenseAble, anyone on the autism spectrum can enjoy interacting with their surroundings in ways that are healthy and enjoyable in and out of the house.

3.1 Key Objectives of SenseAble

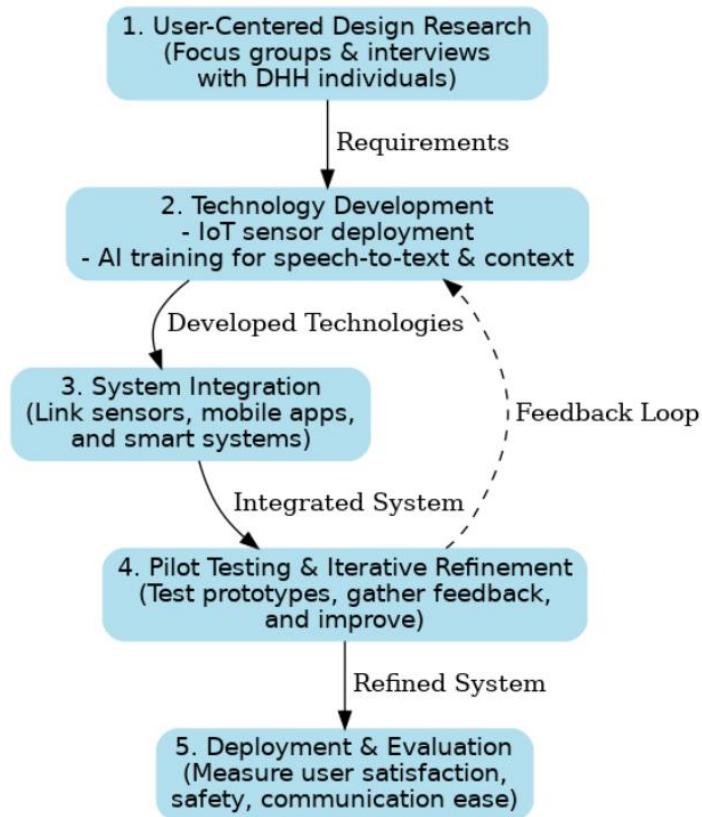
To Move Forward with the Vision: The SenseAble project will target a range of clear goals that are both countable and visible:

- Establishing an AI System: Make an AI system that takes in many types of information and emotions to give suitable feedback to its surroundings.
- Creating Adaptive IoT Networks: Develop sensors that are easy for users to wear and for the environment and that highly sensitive.
- Reducing the Stress on Family Caregivers: With SenseAble, environments are automatically modified to fit the user's needs, allowing family caregivers to enjoy a healthier relationship and giving the user more independence.
- Supporting Universal Design Policies: SenseAble technologies will be adjustable and built in modules, helping neurodiversity-friendly design set new standards in smart settings at homes, schools and jobs.

They strive to achieve their objectives to empower users and not aim to manage them. It expresses the dignity, rights, preferences and human value of all people on the autism spectrum.

4. Methodology

The SenseAble project is carried out using a model involving users in each of five stages of design, assessment and implementation for smart IoT and AI systems that aid autistic people. At every Stage, feedback is used and concerns about ethics, the environment and best practices are considered. Thanks to continuous advancement in technology, ideas are now shaped by what users need, allowing for excellent personalized support of independence and dignity.



Stage 1: User-Centered Research

Deep connections within the autistic community forms the groundwork of SenseAble's methodology. In this first stage, focus groups and interviews will be conducted with autistic people, family members, caregivers, therapists, and educators which fall under the overarching aim to capture the wide array of sensory difficulties, challenges of emotional control, and preferences in communication as relevant to one's daily life.

This project benefits from the combination of qualitative data and quantitative surveys. With this, the project team will formulate a map cataloging user requirements, environmental factors, and support systems. Special care will be put into representing the diverse perspectives across the autism spectrum through age, communication, and cognitive diversity. The outcomes at this stage will guide the design specifications, functional order of importance, and the technology development ethics for later stages.

Stage 2: Technology development

The project development is moving forward to prototyping and SenseAble has a user-focused model to work from. During this phase, the team primarily focuses on two things.

- Scientists are now creating IoT sensors that detect variables such as noise, light, temperature, movement and heart rate variability.
- Machine learning models are being created to recognize warning signs of early-stage sensory issues, emotional instability and behavioral changes. Models can be used to suggest what improvements would help the environment and provide extra comfort.

During this stage, engineers and designers will examine each prototype for how it works, remains safe and is easy to operate and will retest them many times.

Stage 3: System Integration

In the previous step, technology was examined and each part involving the senses, AI and user interface was tested separately to suit one integrated system during easy device assembly.

These particular functions makeup the Integration stage:

- The integration of microcontrollers with mobile phones and smart home networks is required.
- The dashboard contains all information caregivers and users need to manage everything.
- A completely self-governing system that responds to the environment as it happens and looks ahead with predictive techniques.

After receiving user experience, data security and privacy feedback from internal testing, integration design will introduce necessary changes early on.

Stage 4: Pilot Testing and Refinement

During the pilot trials, the effectiveness of the system's use will be evaluated at home, at school and in supported living settings.

Activities in the pilot test stage are:

- Systems are set up in both field and laboratory conditions.
- Gathering statistical information about how users act, what they say and how the system functions.
- We analyzed the interviews and talk sessions with users and family members to answer the questions and discuss other relevant issues.

Any improvements suggested for system accuracy, usability, ergonomics and ethics based on gathered information will be handled by continuing adjustments in the system.

Stage 5: Implementation and Assessment of Impact

Full implementation and measuring impacts are the key aims at this stage. Success for SenseAble in evaluations will be judged by:

- Comfort, independence and the participant's level of improvement in quality of life will be evaluated using User Satisfaction Surveys.
- It will be analyzed how the programme works to calm extreme emotions, cope with stimulation and address a child's need for help.
- Users' wellbeing and the changes in the environment will be examined through the evaluation of other spatial temporal data.
- An overall review will be used to judge SenseAble's effectiveness and inform what to do next for scale-up.

At every step, users gain knowledge to help ensure their needs are attended to, allowing for user involvement.

4.1 Timelines

SenseAble is intended to be carried out accurately with each phase lasting about 30 days over a period of 30 months. The order of each phase is set so it should follow the one that was before it. Using this approach means we go from step one, developing concepts, to step five, where the outcome influences real change in the real world. Thanks to this method, community participation, responsive engineering, unfamiliar engineering and community-centered design can still progress undisturbed. As a result, autistic people know that the project's end product will cover all necessary areas and be built with a modular structure.

Phase 1 (Months 1–6): Co-Design and Requirements Gathering

SenseAble is centred around making designs that rest on how users will interact with them. In Phase One, the project seeks to establish close relationships with autism advocacy and education organizations, as well as medical and industrial groups. When they collaborate, professionals will be able to reach and use insights from people with autism, caregivers, teachers and therapists.

The principal focus is on:

- Participatory Design Workshops: Women and men with autism and their supporters will be asked to describe their lives and name their main difficulties and preferences. All participants will be able to tell their personal stories through different types of

communication and they can be helped with visual storytelling, sensory mapping or group sketching.

- A survey with interviews will be used to understand the community's problems, stressors, wished-for features and concerns about privacy.
- Developing with Ethics: The team will use the findings from the research to design the initial structure of Wearable IoT devices, environmental sensor networks, AI behavior analytics and more. Furthermore, clear ethical guidelines will cover topics such as consent, limited use of data, security, privacy and user control so that the GDPR and research principles are met.

At this stage, the SenseAble design becomes practical, relies on capable analytical approaches and demonstrates social care from the start.

Phase 2 (Months 7–15): Prototyping AI and IoT Systems

The purpose of Phase 2 is to design and develop prototypes that reflect the design and user requirements discovered during Phase 1.

Important outputs for the Business Authority include:

- On the human body such devices can track important signals, like heart beat changes, movement and exposure to sound and light.
- Environmental Sensor Networks: These are used in homes and schools to instantly supply data about the environment.
- Machine learning algorithms are designed to identify the onset of exhaustion, stress and emotional fluctuation in a person. When a sensor notices a need, these models will adjust the environment by turning the lights down, lowering sound or suggesting activities to help relax the user.
- Modular and Adjustable for Individuals: Because people with autism are all different, SenseAble systems will be adjusted manually by parents as needed.

The prototypes will be tested indoors to check if they are safe, useful and fit with the intended purpose before their use in actual pilots.

Phase 3 (Months 16–24): Pilot Trials and Iterative Refinement

The next phase is focused on installing and updating the prototype using real-world scenarios and feedback collected from users.

The main things done there are:

- Pilot Deployments: Creation of SenseAble systems for various residential, educational and supported places in different parts of the world. Participants have a variety of ages, needs and living situations (i.e., those on the autism spectrum).

- Behaviors, sensor results, feedback from log files and interviews are all used to gather data on how well the system works, what effects it has, how pleased the users are and the environmental impact.
- Continuous improvement to the technology is done using the outcomes recorded in the pilot deployment. Retraining will be done using real life data to boost how accurately and quickly AI responds. The equipment and interfaces will be refined to allow easy and comfortable use by the users.

During this phase, adaptive learning is used to learn from users' many experiences and keep SenseAble evolving.

Phase 4 (Months 25-30): Evaluation and Dissemination

At this last stage, the team summarizes the outcomes, evaluates how things went and develops materials for use in society and with policy-makers.

Important parts are:

- Quantitative instruments measuring how much sensory stress, trouble with behavior, self-control and satisfaction is experienced at the start of the intervention, compared to its end. Autonomy, empowerment and the enhancement of quality of life will be main areas for this type of evaluation.
- The creation of toolkits is underway. These kits will go into detail about how to set up, modify, use ethically and solve issues with the robot.
- Offering anonymized data, software and AI algorithms will allow everyone to benefit, since there are no royalty fees.
- Research will be compiled into briefs explaining what strategies the public sector, smart home developers and educators can use to promote homes and schools that are sensory-friendly.

Following Phase 4, SenseAble will have both usable smart technologies as well as an optimized structure for introducing such technologies ethically in all fields.

5. Expected Outcomes

This project introduces an entirely new way of developing assistive places for those with autism. Many environments are rigid, stressful or simply don't work for autistic people. SenseAble creates customizable environments instead of asking people to constantly adjust. A method that recognizes these points demonstrates deep value for neurodiversity or in other words, these differences in sensory, communication or thought pattern are appreciated as they are, not seen as something to be fixed. They are just other versions of human life that are worth appreciating.

Because Artificial Intelligence (AI) and Internet of Things (IoT) are part of SenseAble, people are able to have greater control around their homes, need less self-management and enjoy more freedom and safety. Many aspects are significant within this model such as cultural beliefs, technology influencing people, social inclusion and future design styles. The impacts that may happen are explained below.

a) Braiding Stress Relieving Techniques to Severe Stress Caused by Over-Sensory Simulation

A lot of autistic people struggle with the severe challenge of sensory overload. Endless exposure to breeding lights, loud noises, bizarre smells and crowded conditions always causes anxiety, unease in the mind and brain damage. Regular strategies often make it seem as though the autistic person wants to avoid being among people or to act alone in an attempt to calm themselves, leaving loneliness for others.

Their proposed solution works both to react to problems and to stop problems from spreading. With IoT sensors installed, we are able to check the impact of noise intensity and artificial light in the environment. Both of these signals are immediately handled by AI algorithms. When early signs of sensory stress are spotted, SenseAble is able to dial down the background noise, make the lighting softer or start relaxing visuals. Because the being can change the users' environment on the fly, the users feel supported and are unlikely to become overly nervous when interacting with the world. As a result, SenseAble helps individuals manage their emotions better, lower anxiety and have fewer ups and downs in everyday life.

b) Facilitating the Smoother Transitions between Activities and Spaces

It can be especially difficult for the autistic person to switch from one activity to another, often worrying them beforehand. At times, when the environment, sensory input or society changes, a person may show behavioral problems or just shut down. The goal of SenseAble is to support moving between places by giving people smart reminders and showing them a new environment. It uses simple signals including lights and sounds to gently prepare the user for shifts between rooms, support task completion and finish goals. Warn students in advance with subtle lighting changes, certain sounds and colorful schedule pictures to make changes in routine simpler.

Because of this, individuals get to use simple and calm guidance that makes it easier to adjust to changes, decreasing feelings of anxiety at work, school or home.

c) Reducing Caregiver Intervention Requirements

Especially today, most caregivers are family members, educators or therapists, who must handle the needs, step in during difficulties and usually alter the environment manually. Many types of care may be provided with great care, but there are so many stressful demands that autonomy

decreases for caregivers as well as for the person being cared for. With SenseAble, caregivers can rely on automated assistance which helps them stay involved less often. Because caregivers are less burnout, they can concentrate on their relationships, high-quality education or their private lives. For autistic individuals, becoming more in charge feels easier as the environment supports them instead of the people around them.

These changes create a base for autistic people and their helpers to respect and support each other.

d) Fostering Greater Participation in Education, Employment, and Community Life

SenseAble mainly helps individuals take part in important areas of life that were not previously included in socio-educational programs. Because of their sensory difficulties, autistic people find it hard to take part in school, work, general services and social activities.

When we use SenseAble's methods to lower triggers and rely less on the environment, make personal transitions easier and teach self-regulation, inclusion becomes possible. Children can pay attention in class and employees might succeed at workplaces that take their sensory needs into account. People can go to parks, use community facilities and join in social activities more smoothly. Such involvement leads to happier employees, along with better workplaces, improved schools and an increased engagement in the community. This approach, SenseAble, works to support social justice, human rights and equity.

e) Proto Neurodiversity-Informed Design and Ethical AI Processes

Apart from its main points, SenseAble includes information on neurodiversity-friendly design and AI Ethics. Since the start, the history of technological design has missed or downplayed the needs of neurodiverse people by fitting all tools to a single, average model. SenseAble seeks to solve this by making sure those with autism are included in their design. When you run group discussions, design activities and collect ongoing suggestions, the people who will use the technology have a bigger impact on its design. This way of working stands for responsiveness when including diversity in technology development.

Apart from everything else, SenseAble's AI uses means that follow the required guidelines on transparency, privacy, data protection, consent and responsibility. Besides boosting innovation in the health and accessibility technology space, SenseAble displays that high AI and ethical values can work side by side.

5.1 Anticipated Results

The project's success comes from creating original user-focused technologies and ensuring the results are freely shared with scientists, practitioners, policymakers, technologists and the autistic community. The work of SenseAble is organized around dissemination, to ensure all our tools affect society, remain sustainable and are accessible. For reaching this goal, we have created a wide strategy that addresses the topic from many angles and concepts.

a. Peer-Reviewed Publications

Distributing research results in leading, peer-reviewed academic journals is still the main priority in our dissemination approach. Writing in academic journals enables researchers around the world to access the procedures, ideas, checks and guidelines we use in the SenseAble project. Our aim is to give preference to articles focusing on autism, HCI, accessibility technology and complementary fields from health, engineering and education. Among these are Autism Research, the Journal of Autism and Developmental Disorders, ACM Transactions on Accessible Computing and Assistive Technology.

Among other topics, publications will highlight how we engage in participatory design with autistic individuals and their caregivers, build IoT and AI systems, measure user changes and assess the success of the designed programmes over time. Additionally, we will discuss the important ways of doing design work with people with neurological differences, highlighting both ethical and technological issues they might meet in practice. With our work appearing in many disciplines, SenseAble's important contributions are made known to those conducting autism research and those with an interest in technology, design, public health and education. Having multiple exposure areas will lead to more teamwork, different areas of study and greater availability of the project's results.

b. Presentations at Leading Conferences

SenseAble plans to reach researchers, technologists, practitioners, advocates, policymakers and all participants through both domestic and international conferences. At conferences, people can continue their talks, be evaluated by peers, create valuable networks and learn new things. The key locations for diffusing information are the International Meeting for Autism Research (IMFAR) and the International Conference on IoT and Smart Cities which spotlight the newest developments in smart technology. Other methods will involve oral talks, interactive posters, real-time demonstrations and educational workshops. Illustrating how case studies are valuable for SenseAble technologies will be the main emphases. Participants will receive thorough acquaintance with IoT and AI through various digital and physical samples during the workshop. Because of all these events, SenseAble will enjoy greater respect among leading experts, those who make technology, activists for disability rights and governments, making it easier to roll out and use new technologies in more places.

c. Community Workshops

The main idea at the heart of SenseAble's work is that information needs to boost the power of autistic individuals, their families, caregivers, teachers and support networks. A series of workshops will take place at locations across Sweden and the rest of the country to assist in meeting research translation goals. Advocacy groups, special education schools and care service providers will take part in conducting the workshops. In these sessions, our goals are to:

Participants are introduced to how to use the SenseAble smart environment systems.

- Getting to see real things that sensory adaptive technology can do in everyday situations.
- Learning by experience with wearable smart devices and applications that use AI.
- Helping caregivers and teachers learn to create and run adaptive environments.

The materials for the workshops will be user guides, picture guides and open-source manuals. Along with promoting the early use of emerging technologies such interactions will help participants learn to speak up for their use in schools, public areas and even at home. The active feedback gathered will be most valuable when supporting iterative design and modifying SenseAble to include what users have said.

d. Open-Source Releases

Among the values SenseAble follows are being open, growing together and basing progress on community members' ideas. These values will be respected by making major technical improvements public across open-source networks.

Deliverables include:

- Datasets belong to Anonymized Feedback, gathered from initial studies, contain all types of data about behaviour, environment and system performance.
- Models that help predict sensory excess, detect when emotions are in flux and list improvements to the environment.
- IoT Frameworks are sets of software designed to link sensors, continuously record and utilize data and handle control tasks in an environment.

Produced materials will be accessible under terms that allow their non-commercial adjustment and sharing with others. Results can be publicly accessed from GitHub, Zenodo or by contacting your university. Keep in mind that everything we publish will have complete and easily understood APIs, plus tutorials and user guides, to encourage users everywhere to incorporate them and benefit from them. Open science at SenseAble encourages worldwide developers, researchers, educators and innovators to use its technologies and spread their benefits further.

e. Policy Briefs and Advocacy

Transformative technologies should go hand in hand with guideways to significant shifts in systems. As a result, SenseAble will produce a collection of policy notes designed for smart city planners, public administrators, healthcare leaders and educational policymakers.

They will:

- Tell others what you learned from the project in a clear and plain way.
- Show the usefulness of sensory adaptable environments in health care, schools and urban development.
- Advocate for rules that support the design of smart technology for people with neurological differences.

Autism and disability rights groups in Sweden and abroad, public officials, the European Union and city development boards will receive the policy briefs. Also, working with groups like Autism Europe will be encouraged to make autistic people's voices more heard in the policymaking process. The use of the strategies above empowers SenseAble to create change on a wider level which can eventually reshape society and education to value inclusion.

f. Commitment to Accessibility in Dissemination

Focusing on universal accessibility, SenseAble's activities will lead to new standards in how inclusivity is achieved when communicating research. The main things to do are:

- Videos will be captioned for all multimedia resources, presentations and instructional sessions in formats created by experts.
- Simple Overviews: Articles and technical papers will normally be supported by summary icons.
- SSL Interpreting will now be provided at major presentations, webinars and public events
- Participatory webinars and workshops will be created in collaboration with advocacy groups to ensure that all events are both participatory and inclusive.

So, SenseAble's work, its both autistic individuals and family and the wider community of those with disabilities are all equally cared for—not just the scientific leaders. To ensure their innovations reach the public, SenseAble chooses a clear, user-friendly process for sharing information with the community as a whole, with experts and professionals working on a global scale in autism. At SenseAble, communicating is central; supportive and dignified futures for all is our main goal.

6. Budget Estimate

Time Period: 30 months

Time Period (Months)	Salaries (INR)	Equipment/Material (INR)	Travel (INR)	Other Costs (INR)	Total (INR)
Months 1-6	100000	30000	10000	10000	150000
Months 7-12	100000	30000	10000	10000	150000
Months 13-18	100000	30000	10000	10000	150000
Months 19-24	100000	30000	10000	10000	150000
Months 25-30	100000	30000	10000	10000	150000
Total Estimated Cost					7,50,000