

***Assistive Tech
Start Ups at
Digital Impact Square***

Trestle Labs- A Platform that provides accessibility of print and digital content to the visually-impaired community.

Opportunity area: Trestle Labs build products that excite motivate and engage people to go beyond their perceived limits with the vision of making the world's resources inclusive. Trestle labs has innovated India's first multi-lingual scanning and reading device that addresses print disability by empowering the visually impaired to read any kind of printed text.

Solution: Trestle Labs' innovation, Kibo, is the World's first Inclusive Reading and Learning platform for people with Print and Learning disabilities that makes any kind of Printed, Handwritten and Digital content accessible in real-time through Audio, with an Immersive Reading and Learning experience at par with their sighted peers. So, that they can read and learn all that they aspire to and not just what is made accessible for them through Braille or Audio-books.

DISQ Cohort: Batch of 2017

Start Up Registered in 2018

Website: <https://trestlelabs.com>

***Kidaura Innovations*- A game-based digital screening platform that can help to flag children with potential risk to autism.**

Opportunity area: Autism Spectrum Disorder is a condition related to brain development that causes impairments in three major areas: social interaction, communication, and imagination. The symptoms of Autism often surface from 18-36 months of age. However, sometimes the characteristics for a child with borderline autism, are not easily noticeable and cannot be identified by an untrained eye. This delay in identification causes the child to miss out on the golden period of development and growth, that is crucial in maximizing the positive impact of Early Intervention and therapies as 75% of the brain development takes place in this age group.

Solution: Kidaura Innovation aims at providing innovative solutions to create a positive impact on the lives of these children facing developmental challenges in the age group of 3-6 years. ScreenPlay, a product by Kidaura Innovations is working towards early screening of children who may have a potential risk to autism or any related disabilities in this age group. **ScreenPlay** is a game-based digital screening platform that can help to flag children with potential risk to autism and other related disabilities in a preschool. The underlying framework with the help of technology assesses the child through a series of interactive games that requires little or no expertise.

DISQ Cohort: Batch of 2018

Start Up Registered in 2018

Website: <https://www.kidaura.in/>

AllYouWere- AllYouWere is an initiative that is striving to aid people affected with dementia.

Opportunity area: Alzheimer's is a neurodegenerative disease that usually starts slow and worsens overtime. More than 4 million people in India are affected with some form of dementia. A person affected with dementia (PwD, henceforth) cannot make simple decisions in life, forgets people that were once close to him/ her and has violent mood swings. The memories of their lives are slowly being washed away and they need all the help and support that they can get.

Solution: AllYouWere aims to be that pillar of support these families need. Using effective engagement techniques, AllYouWere aims to invoke positive nostalgic feelings in a PwD. Furthermore, our positive distraction techniques and tracking mechanism aim allows the caregiver of the PwD some time to themselves, thereby reducing the mental stress on them.

AINAK

Ainak is AllYouWere's offering to evoke positive nostalgic feelings in the PwD using personalised content. It is composed of two mobile applications, one of which shall be used by the caregiver to browse and choose the ideal content from their commended items. The other shall be inserted in a Virtual Reality device to be worn by the PwD and would play the chosen content.

APNE

Apne Is AllYouWere's solution to the problem of wandering by PwD. 6 out of 10 PwD tend to wander and majority of them meet with fatal accidents. Apne is a tracking mechanism using which caregivers could be notified whenever a PwD leaves a caregiver- assigned safety net. The trackers are designed in a non-obvious manner so that the entire procedure doesn't feel invasive to the PwD.

DISQ Cohort: Batch of 2018

Start Up Registered in 2018

Lexel- *Early identification of children with dyslexia*

Opportunity area: Problem statement: Dyslexia means "difficulty with words" and is a specific learning difficulty which affects a person's ability to read, spell and understand language. Dyslexia is a Neurological condition with no cure. It has a biological basis and occurs because of differences in brain-wiring. 1 out of 10 people have dyslexia (700 million people) and in India it is 10-15% i.e. 35 million people are suffering from dyslexia.

Proposed solution:

- Early identification: How might we do early screening of children in schools with potential risk of dyslexia so that their golden age of learning is not missed, and they can get appropriate intervention.
- Early intervention (therapists and parents): How might we do early intervention that would help the therapist perform activities and bridge the gap between therapist and parents, through progress tracking and activities that could be home reinforced.
- Early intervention (home): How might we do early intervention at home so that it is individualized, cost-effective and is engaging.

DISQ Cohort: Batch of 2019

Resonate- Addressing the challenges in the education of hearing- impaired students.

Opportunity area: According to the WHO, there are about 466 million people in the world with disabling hearing loss. This accounts for over 5% of the total world's population making it the second most common disability in the world. About 34 million of them are children. It is estimated that up to five out of every 1000 babies are born with hearing loss or acquire it soon after birth. As per the Indian Journal of Otology, 63 million people suffer from significant auditory loss. 4 in every 1000 children suffer from severe to profound hearing loss in India. With over 100,000 babies that are born with hearing deficiency every year.

Proposed solution: Solution: Teaching concepts and articulation to hearing-impaired students through an easy interactive game-based intervention that act as a teaching aid and evaluation tool for teachers so teaching time is reduced in schools. It also acts as a reinforcement tool for parents at home so that they can be involved in the teaching process without knowing teaching techniques.

DISQ Cohort: Batch of 2019

Start Up Registered in 2020

Current Status – Graduated out of DISQ and currently undergoing pilots.

Website: <https://www.linkedin.com/company/learnandempower/>

Auptimism- *Aims to understand how digital interventions can be used to enhance the dissemination of therapy thus elevating the experience and the effectiveness of the therapies on the child.*

Opportunity area: Opportunity area: Autism Spectrum Disorder (ASD) is a childhood neuro-developmental disorder. These disorders are characterized in varying degrees, by difficulties in social interaction, verbal and non-verbal communication, and repetitive behaviour. Its global prevalence is estimated at 1 in 59 children as per Centres for Disease Control (CDC) in 2018. About 2.2 million children globally (between 2 and 9 years) and 13 million people in India live with ASD as per the 2011 Census data. In the past few years, there have been studies showing the potential of technologies to enhance therapy interventions.

Solution: 1. Assistance – Video assistance, making parents understand the Intent of the activity. 2. Progress Tracking – In Therapy Progress Tracking, Home Plan progress tracking. 3. Recommendation of Home Activities- Activities of Daily Living, Cognitive, Sensory, and Motor Skills. 4. Parent Journal- A journal designed to capture the day to day behaviour of a child by the parents who will aid the therapist to devise therapies accordingly.

This Platform helps in:

- Making parents more aware of the child's progress & make them well equipped to take care of their child.
- Also helps in recommending activities to be performed for their skill development.
- Providing a better communication platform for Therapists & Parents.
- Providing a feed of the latest articles, blogs, parent stories, research, and more in the space of Autism.
- A user-friendly journal to help parents and therapists understand the child's likes/ dislikes/trigger points and act accordingly.

DISQ Cohort: Batch of 2020

Current Status – Team partnered with Kidaura for better synergies and focus

I-STEM Pvt. Ltd.- A portal that seeks to empower academic institutions and businesses to better support their students with disabilities

Opportunity area: 1. Addressing the challenge of equal access to educational and employment opportunities for people with disabilities; 2. Lack of support & resources: People with Disabilities dropping out once enrolled/employed due to lack of support from education institutes & businesses.

Solution: It is a SaaS platform that can be divided into two products. The first product is the disability support management- which helps organisations automate various administrative workflows, design inclusive strategies, & create “virtual disability office” which supports people with disabilities in the organisation.

The second product provides AI-powered accommodations- It helps universities and businesses save on cost by automating the most common everyday assistance that people with disabilities require in academic and professional setting.

It also supports alternate format conversion services such as: Printed & handwritten content into digital content, in English, Indian regional languages, international languages and STEM based content; real-time captioning for the deaf.

Tech Components: It is a cross-platform AI-powered portal.

DISQ Cohort: Batch of 2021

Start Up Registered in 2020

Website : <https://www.inclusivestem.org/>

Dextroware Devices Pvt. Ltd.- An affordable head wearable device that enables hands free operation of computers & smartphones

Opportunity area:

1. Unaffordable price range: The reason being 34,000 come from economically underprivileged sections and are unable to afford aids like prosthetics as their price range is between Rs.40,000-Rs.15Lakhs which leads to their limited career growth.
2. Physical work involves the frequent use of their limbs, hence people with upper-limb disabilities are either limited to take white-collar jobs or to pursue self-employment.

Solution: Mouseware, is an affordable head wearable device that enables hands free operation of computers & smartphones, thus allowing the user to control them with simple head gestures/ movements, replacing the traditional handheld mouse. The head tracking sensors record the head movements and transcode them into corresponding cursor coordinates. Mouse click accessories, namely: Foot tap switch, Bite button & smile detection, continuously listen to the user for click input. The inbuilt microphone enables speech-to-text operation for typing purposes that include Indian accent & other keyboard shortcuts as well. The device will be available in both Wired and Wireless versions.

DISQ Cohort: Batch of 2021

Start Up Registered in 2020

Website: <https://dextrowaredevices.com/>

Outrider Tech Private Limited- A device that provides security to your loved ones and to your belongings

Opportunity area:

1. Human Safety: Monitoring minor child or old aged people like Alzheimer's patients as a parent, & tracking their live location and plugging it into their actual audio feed;
2. Recovering/ tracking anything that you misplace/ was stolen.

Solution: It is a GPS/GSM Module and includes a mic that can track and monitor through an application on your phone. Thus, if kept in the bag that was misplaced or in the car you want to track or in the bag of the child you want to track, or on the walking stick of your old age parents, it relays the information with regards to the location and the live audio feed that we can be used to track and to monitor. The device also includes a SOS button, when pressed it sends an alarm to your loved one to rescue you in case of any problem.

DISQ Cohort: Batch of 2021

Start Up Registered in 2020

Website: <https://www.outrider.live/>

Askim Technologies Pvt. Ltd- Accessible Multimedia Prescription as a service on Pay-Per-Use

Opportunity area: 1. Medical Prescriptions are mostly in English which is difficult to comprehend for most of the population of India. 2. Unattended Senior Citizens who have trouble taking proper medicines. 3. Specially-abled people who have difficulty taking the proper medicines.

Solution: The solution would have multimedia ontology created for all the medicines in all formats available in India in all Indian languages. It will also have a facility to add voice notes by the doctor which will be added to the Multimedia Prescription for reference in case of any confusion.

It is a fact that people understand voice commands in their native language more effectively. They would first find out the archetype of the user, get his preferences for information dissemination, and provide him information in the format he can easily understand and act on. Few mechanisms of this information delivery are: 1. Multimedia Prescription (Audio-visual prescription) on a smartphone (Android/ iOS); 2. IVR Based system for people who do not own a Smartphone or data connectivity; 3. Graphical or touch based information for people with special abilities.

DISQ Cohort: Batch of 2021

Start Up Registered in 2020