

# Reality of the Future



*With a team of highly motivated individuals, all of whom share the common vision of coming up with innovative products based on virtual reality and augmented reality, this tech startup has made its presence felt across the world. This is backed by the fact that about 60-70% of its clients are from outside India. Hemanth Satyanarayana, founder and CEO, Imagine Software Labs speaks to India Now Business and Economy on the rapid advancements his company is making in this arena.*

**M**y interest in virtual reality (VR) and augmented reality (AR) goes back to my college days. These technologies hold immense potential to enhance the experience of reality. However, the idea of venturing into the VR/AR space struck me much later.

After having worked in VR/AR startups in the US for eleven years, I had returned to India. During a casual visit to a textile shop along with my family, I realised the inconvenience faced by women while selecting saris. It is difficult to know whether a particular sari would suit one or not—seeing a mannequin wearing it or a salesperson draping it around him/her would not really help. This prompted me to think of a solution wherein a customer could have a virtual sari trial, by combining the techniques of computer vision and image processing. That is how Imagine’s journey began.

**WHAT WE DO**

Initially, ours was a three-member team, including myself and two college students. The first product we developed was Dressy (previously called TrialAR), a virtual trial room that helps a person try on apparels/ jewellery. It comprises a 50-inch LCD screen, an advanced CPU connected to HD cameras and a user interface that serves as a dressing table.

Once the prototype was ready, we approached a few retailers in Hyderabad and the response was good. Users have to just stand in front of the screen and try a dress through hand gestures. This would give them a fair idea of whether a particular pattern or sleeves or

**WE HOPE TO CASH IN ON THE Government's initiatives to showcase our work at a pan-India level.**

colour would suit them or not.

In 2012, we went on to win the MIT TR35 Innovator of the Year Award; following this, we received a lot of media attention and it brought us into the limelight. Investment too started flowing in. We later pivoted our business model to a software-only service. We now provide Dressy software to e-commerce and bricks-and-mortar stores in the form of an iPad app, thereby enabling them to offer virtual fitting service.

Our second product was an Augmented Manual which we made for Thermo Fissure, a US-based refrigerator manufacturer. The challenge they faced was the inability to carry a lot of manuals while repairing a device. We used AR in the form of a simple app—the user only has to open the app in our device and point it at the hardware. The app immediately tells what is wrong with a particular part and how to repair it.

We also developed HeritageAR, an app for the Aga Khan Foundation. It is an AR-based guide for one of their heritage sites—the Quli Qutb Shahi Tomb—in Hyderabad. While exploring historic structures, we either refer to placards, or go by audio-based guides. We created a mobile app which can be downloaded at the reception of the site, free of cost using Wi-Fi. When users open the app in their device and point the camera at the site they want to



THE VIRTUAL FITTING ROOM



Tombs at Aga Khan Foundation; on the right, a view of the tomb through the app HeritageAR.

## INDIA'S FIRST AR SHOOTING simulator for the Army, ShootAR enables a soldier to see virtual targets in a real room.

know about, they can view its 3D model which they can turn around and see all the details. This helps them get relevant information without the assistance of a travel guide.

Our next product ShootAR—an augmented reality based shooting simulator—was developed for the Indian Army back in 2012. It happens to be India's first AR shooting simulator for the Army—it enables a soldier to see virtual targets in a real room. The soldier has to point a sensor-controlled gun at targets popping up suddenly in the room and shoot at them. The application will automatically detect a hit or a miss.

Our latest product is NuSpace, a virtual platform where users can see and talk to each other although they are not present at the same place, and also interact with the environment as they do in the real world. All they need is a VR headset compatible with NuSpace. In the virtual world we have created, the host can offer others information with the help of videos, PPT presentations, PDFs, 3D models, etc. Any person present in the meeting can interact like he/she would in a real room, though he/she is actually present in his/her own office, home, or any other remote location. NuSpace finds applications in industrial training, employee training, etc., and it was awarded the Most Innovative and High Potential Product Award at the NASSCOM Product Conclave, 2016.

Today, we are a ten-member team—five in the creative team and five in the programming and execution team. What is common in all of us is the zeal to create innovative products which will be recognised across the world.

## MARKET RESPONSE

The market response has been good for Dressy. However, we are yet to finalise the financial model which would place us in a comfortable position. We have not done any formal marketing; our popularity has spread through word of mouth—every week, we have a few retail stores signing up for Dressy. Also, clients contacting us for other requirements get interested in NuSpace when we tell them about it.

We supply our software mainly to companies, and not individuals. Within two years, probably we would reach out to consumers directly. For Dressy, we may introduce a 'pay-per-click' model, wherein we would charge a rupee for every virtual trial when we enter the B2C market. For now, we plan to charge a one-time cost—say, something like US\$ 40,000.

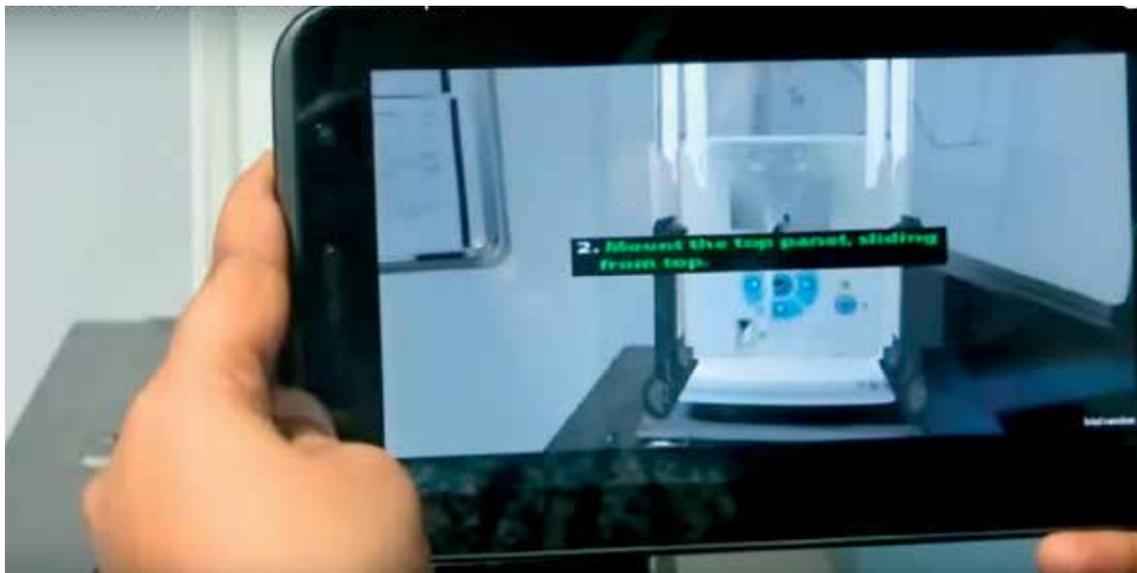
For NuSpace, we follow a monthly subscription model, and also charge a platform customisation fee. So if clients want their virtual environment to look like that of the seventieth floor office of Bank of America in New York, or simply like a garage in Chennai, we can make it happen by charging a customisation fee.

Until the last financial year, we were growing at about 1.5 times or so. But in FY 2015-16, growth went up by about 2-2.5 times in terms of revenue, and we broke even. This year too, we have witnessed good growth, and the numbers look promising. So, we are optimistic about ending the year with remarkable success.



**ShootAR**  
AR Simulation for Indian Army

Images courtesy: Imagine Software Labs



Demonstration of the Augmented Manual, an Imagine product.

## APPLICATIONS FOR AR/VR

I have been working in the field of VR and AR since 2004, and I am aware of what is happening globally in these fields. Today, everyone is building VR and AR apps. But five years from now, one app might be used in the field of communications while another may be in the field of entertainment, and they will not be seen as competitors at all.

The VR and AR space in India is getting more competitive by the day. We will soon find more VR- and AR-based games though it will take a few more years for them to find industrial applications. These technologies can find many applications in the fields of productivity, training, and entertainment too. For instance, until now we have been seeing cinema only as a means of entertainment. But VR and AR have lent it a whole new dimension. People may consider them as just entertainment, but we can definitely take them beyond that. Someday, Sachin Tendulkar sitting in India could be training another cricketer in Portugal through the use of VR.

As far as Imagine is concerned, Facebook is a competitor, especially since they recently announced their VR-based networking platform. Another is

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AltspaceVR. However, my view is that competitors have their own vision and would pursue their own paths.

## THE FUTURE

Dressy is popular, but NuSpace is about 4-5 times bigger in magnitude. We support a lot of platforms on NuSpace and we want people from across the world to connect through it, which is a challenging task. At present, we are working on an application of NuSpace in which we will offer a real-time dive-through from the sky into any facility—a drone with multiple cameras will provide a live fly-through experience of say, a flooded region. Technically, it is complex, but it is one of the products we are planning to come up with. We, at Imagine, also hope to cash in on the government's initiatives and showcase our work at a pan-India level. ■