

## The most Promising Indian start-ups among world's Top 50

*Prof. A K Mittal \**

Indian artificial intelligence (AI) start-ups, Bengaluru-based Mihup Communications Pvt. Ltd and Chennai-based Mad Street Den Systems Pvt. Ltd, are among three early-stage local ventures that are on the list of some of the most low-key, yet promising start-ups around the world, according to a Bloomberg report.

The emergence of Mihup and Mad Street Den highlights how AI start-ups from India are slowly starting to go mainstream and are among the hottest focus sectors for top venture capital firms such as Accel Partners and Sequoia Capital. Last year, Mihup raised about Rs45 crore from investors such as Accel, while Mad Street Den also raised an undisclosed sum in a Series A round from investors led by Sequoia Capital.

According to data from start-up tracker Tracxn, the number of Indian start-ups that are dabbling with AI and building intelligent systems, products and machines around the rapidly-emerging technology is on the rise. Over the course of the past decade, India has produced at least 292 start-ups that have built products around AI, according to Tracxn. Of these, about 68 early-stage ventures have attracted cumulative funding of about \$124

million across 89 rounds of funding.

“It's a pleasant surprise to see a fair number of Indian entrepreneurs attempting to build AI startups now—that was not the case till a few years ago. India has traditionally been known as a destination for software services, not products. People always used to ask the question as to when we would start building hi-tech products and companies. So, it's a welcome change to see that shift happening now,” said Abhishek Goyal, founder of Tracxn.

Other local start-ups that have recently attracted the attention of the mainstream VC community include healthcare AI start-up SigTuple, which received backing from Accel as well as Flipkart founders Sachin and Binny Bansal, among others; hiring start-up Belong, which has built an AI-enabled candidate sourcing platform; and IDG Ventures-backed Uniphore, which is working on speech recognition, voice biometrics and virtual assistant solutions and has raised about \$6.6 million so far. A number of marquee investors, including Binny Bansal and T.V. Mohandas Pai, even invested in AI-focused venture fund Pi Ventures earlier this week.

In a December interview, Shekhar Kirani, a

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partner at Accel Partners India, said that AI would be one of the top focus areas for the VC firm's fifth India fund—Accel raised \$450 million as part of its fifth India

fund in December. Mihup Communications is one of the companies in which Accel has invested.

According to experts tracking the Indian start-up ecosystem, areas such as natural language processing, machine learning and cognitive computing have caught the eye of investors across the board, given heavy investments that companies across sectors are making in the sector, increasing the potential for big-bang exits over the next 5-10 years in the same way as the consumer internet sector did for investors over the past decade.

Companies ranging from the world's largest technology services firm International Business Machines Corp. (IBM) to new-age tech giants Google Inc., Apple Inc. and Facebook Inc. to automotive giant Ford Motor Co. have already poured billions of dollars towards leveraging cognitive computing and AI.

### **Mihup Communications Pvt. Ltd**

Total funding: \$6.7 million; investor: Accel Partners

Imagine yourself browsing one of the over-the-top content apps. You want to figure out if a certain movie is available for viewing. You can type it out, but feel a bit too lazy. You say the name. And the movie pops up on the screen.

This is what exactly Mihup Communications Pvt. Ltd, a company that is building a platform for speech-to-text recognition, enables. In the process, it has dared to compete with Amazon's Alexa and MindMeld Inc.

Mihup—a brainchild of Tapan Burman, Biplab Chakravorty, Sandipan Mandal and Sandipan

Chattopadhyay, who was earlier chief technology officer at JustDial—was set up in June last year. Burman, Chakravorty and Mandal had earlier founded Nectar Consultancy Services in Kolkata, a firm that provided responses to SMS queries from consumers, before devoting themselves to create a “man-machine interface” in vernacular languages.

The firm's app currently recognizes Hindi, Bengali and English, and plans are to include Kannada, Telugu and Tamil in its repertoire in the next six-to-eight months, said Burman.

“The problem we are trying to solve is the problem of the next 500 million mobile users in India. Content consumption in regional language is increasing. There has been a lot of research and development happening in different institutes, but nobody has really made a concrete business out of it or even built a commercial product,” said Burman.

Mihup raised about \$500,000 from Accel Partners and an undisclosed amount from start-up incubator Xelpmoc last year. According to Burman, Accel has committed an investment to the tune of \$6 million over the years. The company has already roped in an over-the-top content provider, an audio systems manufacturer and a caller-ID service provider as clients.

“Internet is biased towards English-speaking audience. Using a vernacular keyboard is very cumbersome. People forward messages but hardly anyone types. Essentially, wherever input-output becomes voice-based, Mihup can be used, be it on mobile and desktop. We can also build an intelligent IVR (interactive voice response system) based on Mihup, say for banks. We may make call centres as much automated as possible or detect emotional content of a message. There are multiple use cases,” said Chattopadhyay. The firm has a 20-

member team, split between Kolkata and Bangalore, and also boasts of a robust set of advisors, comprising former Microsoft Corp. executive Arnab Nandi, former Twitter Inc. executive Pankaj Gupta and SAP AG executive Sauvik Banerjee. Sayan Chakraborty

### **Mad Street Den Systems Pvt. Ltd**

Funding: Undisclosed; Investors: Sequoia Capital

Chennai-based Mad Street Den is arguably one of the most recognizable artificial intelligence start-ups from India. Chief executive officer Ashwini Asokan (who is also known for being outspoken about skewed gender representation in the Indian start-up ecosystem), however, is the first one to point out that using AI on a large scale in a meaningful way is a “massive challenge” and that we are in the “very, very, very, very early stages of building AI right now”.

Asokan, who previously worked for Intel Corp., and her husband Anand Chandrasekaran (who is the firm's chief technology officer), a neuroscientist, both worked in the US before deciding to return to start up in 2013.

“To build generalizable AI is one of the founding principles of why we started this. The second part of the founding principle is making AI accessible to millions of people across the globe. Not just to build it, but actually to build it on the scale that applies to people across the world. The first one represents Anand's vision, and second one represents why I am here,” said Asokan.

The firm spent more than a year building out core AI technology modules and dabbled in products around gaming and analytics before deciding on first launching a solution, vue.ai, meant for retailers.

“The premise was to say we'll have a platform,

and we'll build one particular vertical after another, but there was a steep learning curve for us in terms of understanding how a technology like AI can actually fundamentally change the way in which a particular business can work. Retail at that point was sitting on a tonne of cash, and it was so much easier to walk into retail than any other purely because they were much more ready to experiment than anyone else,” said Asokan. So what does AI in retail look like? For consumers, it's personalized websites that change based on every action they do on a website; it's the ability to upload a picture and find matching products, and a better browsing experience overall. For retailers, it improves conversion rates on the back of a better consumer experience, prevents cataloguing errors, and reduces the time and effort humans spend in doing this.

Mad Street Den currently works with firms such as furniture e-commerce site HipVan in Singapore, and fashion e-tailers such as TataCliq, Craftsvilla and Voonik in India.

Mad Street Den's eventual branching out to domains other than retail is set to happen soon, though. “Sometime this year,” said Asokan. Sadhana Chathurvedula

### RENTING WEARABLES

#### **Omapal Technologies Pvt. Ltd.**

Total funding: \$6.9 million; Investors: IDG Ventures, Sequoia Capital, Tokyo-based GREE Ventures. (Other investors include Snapdeal founders Kunal Bahl and Rohit Bansal, Paytm founder Vijay Shekhar Sharma, Freecharge founders Kunal Shah and Sandeep Tandon, and Zishaan Hayath, founder of Toppr.)

Omapal Technologies runs the fashion rental start-up Flyrobe—an online platform for men and women to rent designer apparel and accessories.

Since its inception in July 2015, the company has grown to register 500,000 monthly visitors, 200,000 mobile-application downloads, and claims to rent out apparel worth \$1 million per month.

Co-founder Shreya Mishra says innovating around customer experience has helped the firm scale up.

“There are three important things to fashion rental, which we stick by; one, the authenticity of product so that it looks and feels brand new every time it is rented; two, that it fits well—we launched custom fitting service, for every first-order by a user we send for at-home measurements; and third, a smooth customer experience like (making sure) the delivery and pick-up is on time.”

Back in July 2015, the three founders—Mishra, Pranay Surana and Tushar Saxena—engineers from the Indian Institute of Technology-Bombay, left their investment banking and analyst jobs to start Flyrobe.

The trio pooled in Rs10-15 lakh, bought 100 pieces of designer apparel, set up a website on Wordpress and began renting out clothes in Mumbai. “We did the deliveries and the pick-ups on our own, and this gave us the opportunity to meet our customers, know who they are, what they like and a direction to build forward,” said Mishra.

In September that year, Flyrobe was officially launched. The company has an asset-light model: it currently has over 5,000 products, procured from over 70 designers such as Ritu Kumar and Masaba Gupta, and stocked in warehouses. The firm rents out the apparel for four days. While the retail price of a piece of apparel can range between Rs8,000 and Rs200,000, Flyrobe rents it out for between Rs799 and Rs30,000, sharing 50% of the rent earned with the designer.

“Flyrobe has evolved to become a destination for lesser known designers to attract new customers, do brand building among those who can rent their outfits but hesitate to pay a high price to own the outfit,” said Mishra. Flyrobe has a team of 40 and serves customers in Bengaluru, Delhi, Hyderabad and Mumbai. The firm says men and women between the ages of 24 and 35 are its main customers, with men's wear driving 35% of the revenue. Arushi Chopra

Other promising global start-ups on that list include California, US-based commercial drones start-up Airware, cloud security firm Distil, Palo Alto-based AI start-up Kahuna and Silicon Valley-based Quanergy Systems, which is working on self-driving car technology and has raised \$134.5 million so far from investors such as Samsung Ventures and Daimler.