NASSCOM®
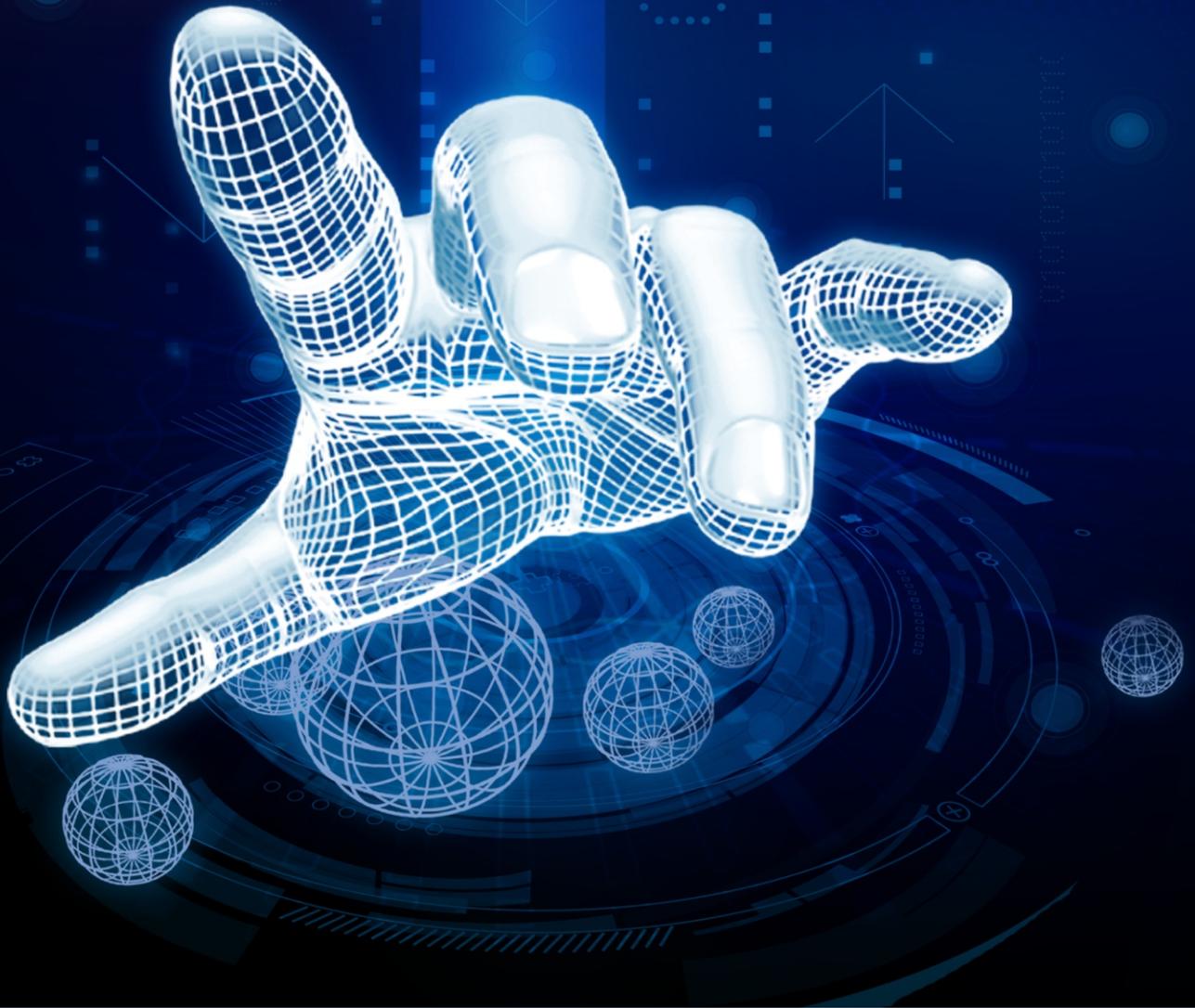# Center of Excellence-IoT & AI
A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP

REPORT FOR

APRIL – JUNE 2019
Center of Excellence - IoT, Gurugram

Ministry of Electronics & Information Technology
Government of India

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Investor Hour with Chiratae Ventures held at CoE Gurugram

4th April, 2019: Nayrhit Bhattacharya from Chiratae Ventures (formerly known as IDG Ventures) was invited to NASSCOM CoE Gurugram on 4th April 2019 to enable an exclusive pitching opportunity to the 12 deeptech start-ups shortlisted by CoE Gurugram.

Nayrhit is part of the investment team at Chiratae Ventures, where he focuses on early-stage investments in FinTech, HealthTech, Enterprise SaaS, Industry 4.0 and Consumer Media.

A total of 12 start-ups teams pitched for during the session including, PranisCOM technologies Private Limited, Capital Quant Solutions Pvt Ltd, Docsinblocks, AgSmartic Technologies, Finbot Private Limited, DeepSight AiLabs Pvt Ltd, Datacultr, Kashware, Ringlerr, DronaMaps, Veda Labs and Wobot.AI.

WAFit 2019 kicks off at Aerocity

27th April, 2019: World Auto Forum on IT was held in Delhi on 27th April at Holiday Inn, Aerocity. A day-long event brought together the CXOs from Honda, HeroMotoCorp, Mercedes Benz, JBM, Uno Minda, etc at the forum.

Mr. Sudhanshu Mittal, Director, Industry4.0 at NASSCOM was invited to a Power Panel & was also the Key Note Speaker at the event. Also, leading decision makers & industry experts from the Automotive sector apart from the Innovators & Professionals representing emerging technologies that could impact the Automotive sector were present to share a thought.

MeitY officials visited CoE Gurugram

6th May, 2019: Mr. Ajay Sawhney, Secretary, and Mr. Gopalakrishnan S, Joint Secretary, MeitY, Govt of India paid a visit to CoE Gurugram on 6th May. Secretary of MeitY was here to observe on-ground impact analysis of start-ups work.

Start-ups like DronaMaps, Airveda, ChironX, Shellios, Stackfusion, Gesture Research, Devnagri were present to showcase their work and interacted with the officials.

Investor Hours with Indian Angel Network (IAN)

Investor hours with Indian Angel Network was held at CoE-IoT, Gurugram on 10th May for pitching session. The IAN members formed two panels for the pitching session. Mr. Sanjay Rishi, Head of International Business Development and President, South Asia & ANZ, American Express and Mr. Vikas Kuthiala, MD, First India Assistance (24-hr global emergency assistance services) were part of the panel.

In the second panel Mr. Anku Jain, MD, MediaTek (MediaTek Inc. is a leading Taiwan based global fabless semi-conductor company) and Mr. Anirudh Agarwal (Executive Director, Sharda Group) were present.

12 teams were shortlisted and invited for pitching sessions. DocsInBlocs, Parkzap, DataCultr, DronaMaps, Veda Labs, Shellios, Finstinct, ChironX, Devnagri, Eventus Life, Kashware and TorchIt were few present and seven teams out of 12 are incubated in CoE-IoT, Gurugram.

Six teams have been invited to the next round of pitching to the Investment Committee meeting at IAN Head Quarter at May end, including 4 out of the 7 incubated teams in CoE-IoT, Gurugram.

IBM Call for Code held

28th June 2019: NASSCOM Center of Excellence-AI & IoT, Gurugram & IBM organized "Call for Code" at CoE Gurugram which saw Blockchain developers join in for a code-a-thon, using IBM code patterns, to demonstrate how to use Blockchain & Hyperledger Fabric network to facilitate collaboration among non-governmental organizations (NGOs) in managing the supply and demand of goods to be distributed to the needy.

The blockchain based solution presented here brings about a transparent way for NGOs with similar or diverse portfolios to collaborate with one another to efficiently distribute goods. When a party approaches an NGO with a specific need (say, books for education) and the NGO cannot address the need or cannot do it alone, then that NGO can create a new request on the blockchain network.

Any other NGOs that can contribute would update the request over the blockchain network. The platform creates trust, accountability, and transparency of operations among the NGOs.

Solar PV Project Finance masterclass successfully held

28th June 2019: - One day master class for start-ups and existing players in the solar sector who are looking to grow and expand their business was held 28th June'19 at Centre of Excellence – IoT, Gurugram.

The aim of the workshop was to make understand the participants the various existing and new innovative financial models for financing solar PV Project. Various financial models were discussed for both rooftop and ground mount solar PV Projects.

The workshop had also introduced the participants to various subsidies and financing options available from the Government of India through various schemes and policies.

The training also covered the need and approaches for long term performance management of the solar plant - as in the financial sense - it is a capital asset and investors are in the asset management business. Data and strong analytics and insight from the data which are crucial for this.

Delegates from Yamaha Japan visited CoE-IoT, Gurugram Center

28th June 2019: Delegates from Yamaha Motors Japan visited CoE Gurugram to understand various elements of the centre. Mr Sudhanshu Mittal, Director, CoE had a fruitful discussion on the start-ups and incentives taken in IoT and Industry 4.0. They also met the various start-ups during their visit to the center.

DronaMaps
Founder(s): Ayushi Mishra & Utkarsh Singh

DronaMaps recreates, preserves and manages geospatial data in GIS-enabled centimeter level 3D maps, both indoors and outdoors. DronaMaps uses multispectral Image Analytics through drones for Precision Agriculture. Using its deep learning algorithms DronaFarms helps in Soil health analysis, Yield prediction, Crop Disease detection & segregation as well as irrigation contour management.

Pilot Details:
- DronaMaps conducted a survey of a collection of 81 highly dispersed villages in Tikamgarh district, Madhya Pradesh, scattered in an area of 400 sq. km. with the average village area being upto 2 sq. km and the average distance between the villages is around 5 km. The drone based survey outputs were to be used by the government to lay pipelines for drinking water. In order to create a robust plan, the authorities needed maps with 5 cm resolution, 25 cm interval contours, and z-level accuracy of 15cm to maintain elevation accuracy required for pipeline planning. Area covered: 380 sqkm, Total length of roads digitized: 763.2808 Km, Total number of elevation points extracted: 96546, Total buildings extracted: 57100, Number of wells extracted: 12679, Hydrological structure: 542, Waterbodies: 1165, Number of bridges extracted: 781. The extracted features are converted into CAD file formats for pipeline planning with elevation points annotated at each point of interest.
- The unavailability of scientific geospatial data and analysis for the local police in India creates a huge problem — the forces on the ground have no macro picture of what is happening, while the command center and planners have no visual micro picture and are missing data. DronaMaps had to facilitate the District Administration and the Police in managing the Sawan Jhula Mela at Ayodhya. Using this data, they were able to create a major Sector plan of the City of Ayodhya for advanced operations. A city of 26 administrative sectors, we devised 5 drone sectors with overlaps to ensure maximum penetration with every sector being large enough to maintain security, surveillance and ensure the efficacy of operations. To ensure smooth execution on the day of the event, they established a Drone Command Center in the Ram Katha Sangrahalay which had two primary functions consisting of establishing a constant high definition live feed and digital communication, process & analyze the live data and relay/coordinate communication to the Police and Monitoring & Managing constant flying intersecting airspaces of UAVs using commercial grade software and expertise. Not a single casualty, whether major or minor was noted.
- The government has launched several schemes for rural development to build roads, houses, Toilets (Swaccha Bharat Yojana). Mapping with such granular detail allows officials a way to track the ground execution of contracts and provides a scientific way to enforce transparency. Through the use of their technology, they've brought down the amount of money spent on land surveying by local authorities by almost 40–60% and the time dedicated to surveying was slashed by a tenth.
- DronaFarms based on UAV aided multispectral image analysis is able to detect plant stress on 10 types of crops, to recognise the extent of crop disease atleast 10days before the human eyes see it. The collated aerial data is also used to assess the stand count for crop yield prediction. Plant stress reports identify the percentage and the exact location of areas with stress. In this context, "stress" refers to plants that have not emerged into healthy plants, areas without plants, areas with diseases, drought or other yield-limiting factors. Essentially, the user gets a crop prescription map with all problem-causing areas of the field. Weed stress reports are used to identify weeds before they spread and it also allows to optimize pesticide usage and crop sprays.

ChironX
Founder(s): Sombodhi Ghosh & Dr Mausumi Acharyya

ChironX AI is a computer vision based diagnostic startup that uses it's patent pending deep learning algorithm, to do early disease detection, risk prediction and prognosis of diseases which are local to the eye as well as systemic diseases like Cardiovascular ailments, Hypertension, Alzheimer's, Stroke and Parkinson's. It can plug-and-play into any third party hardware device, which is used to scan the retinal image. Their solution is hardware agnostic and capable to work on edge-based infrastructure as well, ensuring that it can easily be deployed in low-resource environments as well. Due to the nature of how systemic diseases manifest throughout the body, ChironX's algorithm is capable of detecting hundreds of diseases and complications from the retina with 95% accuracy within seconds, non-invasively & cost-effectively, to come up with a comprehensive report having all the risk predictors in a matter of minutes.

Pilot Details:
- In total they are live at 14 sites with a daily patient volume of over 1000, including Disha Eye Hospital (Kolkata and WB), Currae Eye Hospital (Kolkata) (part of Patni Healthcare), Dr Shroff Charity Eye Hospital (Delhi), Swarup Eye Hospital (Hyderabad), Arunodaya Deseret Eye Hospital (Gurgaon).
- ChironX is one of the two startups, pan India to have won the Healthcare AI Innovation Challenge 2019, Mumbai, which saw more than 350 attendees and a diverse set of speakers including Maharashtra Chief Minister Devendra Fadnavis and Amitabh Kant (CEO, NITI Aayog). ChironX has got a nod from Govt of Maharashtra for Pilot in 8 districts of Maharashtra including Pune, Satara, Sindhudurg, Osmanabad, Nandurbar, Nashik, Akola & Nagpur. The deployments in Maharashtra are aimed at supplementing the shortage of personnel and lab facilities necessary for diagnosis and improving access to early detection and diagnosis especially in areas where hospitals are not available.

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