Infosys Digital Makeathon 2018

Guidelines

- Each team can pick one use case based on theme of your interest and use case of your choice. You can start working on a viable solution right away. We would appreciate the solution to be creative and based on original ideas. Please refrain from copying ideas from the internet or other forums.

- The solution should address the problem statement and encompass the below key areas –
  1. Context – Describe briefly the business objective of the solution
  2. Proposed Solution – Describe proposed solution along with technology to be used. Also describe what's unique about your solution.
  3. Technical Design – Explain the technical design / architecture of the solution
  4. Prototype – Working model of the solution which can demonstrated to Jury panel
  5. Benefits – Please provide quantitative as well as qualitative benefits
  6. Assumptions – State the assumptions made
  7. Implementation of the solution (optional but your progress on implementation of solution will earn brownie points during evaluation)

- Faculty members will also be part of their respective teams.

- Each team needs to carry their own laptops and requisite software / tools for the event. Teams are open to use any technology(ies) as per their own discretion.

- Infosys will provide mentors for each theme during the event. It will be on the teams to get in touch with the mentors and discuss the high level solution. All solutions will be judged by a jury constituted of eminent industry leaders. The decision of the jury will be final.

  Please Note –

  We will conduct a quick connect on 22-Oct-2018 from 12:00 – 1:00 PM to answer any queries from your end. The queries should help you clarify your doubts for any use case. Use case mentors will be on call and you can ask your queries. Please refrain discussing your solution on this call. Any discussion on specific solution may lead to sharing your solution with other teams.

  Call-In Details

  India – 080 64800111 / 011 64800111 / 022 64800111 / 044 64800111

  Access code: 582 234 412

  Steps to join the bridge –

  1. All teams members for each team to co-locate and join the conference from a room where there is no background noise.
  2. Each team (all team members) need to join from a single phone.
  3. Please dial the India number – 080 64800111 and wait for an automated voice which will assist you to get connected to the conference.
  4. Enter the Access code – 582 234 412 followed by #
  5. Once you join the conference, please state your college name and put yourself on mute
  6. In case you get dropped off or loose connection, please follow the steps 1-6 again.
  7. Please join 10 minutes before the call

  Fill in the attached details about your team and send it back by 23-Oct-2018.

Use Cases

Themes	Use Case Description	What is expected
AI-ML	**IDM-01 : Trade Re-construction** Modern regulations are being written on the assumption that multi-channel trading conversations are the reality and that multi-channel reconstruction is technically possible. MiFID II takes the important step of saying that “management must have clear oversight of recording processes.” To achieve a solution that satisfies all parties it will be necessary to combine the systems that record conversations with those that flag conversations for investigation. The route to this will consider patterns in trading records as well as communication channels. Specialisms such as big data interrogation, artificial intelligence, machine learning, quants algorithms, speech recognition and voice recognition will all play a part.	Create a solution for "Recreating a Trade History" by analyzing all communication about a particular trade at the bank across written (email, text messenger, WhatsApp, FB, Twitter, other social channels on bank's network), voice calls, IVR, etc., tap repetitively used code words from the communication against Trader ID and generate a Text + Audio/Video log to be submitted to compliance in 72 hours of ask.
AI-ML	**IDM-02 : Comprehensive ATM Surveillance for Bank** Artificial intelligence makes it possible for banks to automate video analysis and threat detection, which significantly reduces manual monitoring and enables security teams to respond to incidents in real time. Add facial-recognition technology to the mix, and banks have a real edge against criminals. Integrated video solutions can allow banks to rapidly sort through their transactions and find irregular activity, such as the same person making multiple transactions with different cards or someone standing in front of an ATM for a period of time without making a transaction (a possible sign of someone installing a skimming device).	Build an image cum video analytics solution for various banking fraud detection scenarios like ATM fraud / surveillance, bank robbery / attack surveillance and report suspicious activities.
AI-ML	**IDM-03 : Content Mining Regulatory Compliance and Reporting:** The EU General Data Protection Regulation (GDPR) became effective on 25th May 2018. It requires firms to provide comprehensive and clear explanation to users on the data that is collected from them, how the firm uses this data, and who all it shares this data with. Firms are also required to gain explicit consent from users for retaining and processing this data. An AI/ML based solution (having NLP capabilities) could automatically examine the concerned FIs’ privacy policies, and compare their policy documents with the EU GDPR policy clauses – to automatically ascertain, for example, whether in the policy document: - Firm has identified 3rd parties with which it shares the users’ personal data - Language is confusing or vague - There is a clause of implicit users’ consent (as opposed to EU GDPR’s mandate of explicit consent).	Using context / text analytics APIs, build a solution to identify and categories the information in the docs, breaching the specific regulatory needs like of GDPR, CCAR and other such regulations.
AI-ML	**IDM-04 : Real-time Fraud Analytics** In its latest report, McAfee estimates that cybercrime currently costs the global economy some $600 billion, or 0.8% of global gross domestic product. One of the most prevalent forms and preventable types of cybercrime is credit card fraud, which is exacerbated by the growth in online transacting. The speed at which financial losses can occur when credit card fraud takes place makes intelligent fraud detection techniques increasingly important. Because of the availability of large volumes of customer data, together with transactional data that is updated as transactions occur, AI can be used to effectively identify credit card behavior patterns that are irregular for specific customers.	Provide analysis of nature of the past transaction, filter them into buckets of unique patterns of fraud based on past investigations and classify incoming transaction into normal or fraudulent bucket.

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IoT	**IDM-05 : IOT lead Safe Driving and Road safety:** Accidents are ever increasing in India. The apathy of road conditions and lack of traffic sense makes Indian roads among most dangerous in the World. Bad road conditions, over speeding, poor street lighting, road congestions, weather conditions - extreme monsoons, flash floods, heavy fogs, etc. are all factors for dangerous / fatal driving conditions. Reference Article - (400 deaths in a day, https://economictimes.indiatimes.com/news/politics-and-nation/400-deaths-a-day-are-forcing-india-to-take-car-safety-seriously/articleshow/62439700.cms)	Provide solution how we can make Indian roads safe for driving and save precious lives
IoT	**IDM-06 : IOT based Smart Agriculture and Food Security** India has one of the largest and densest population of the world with tremendous pressure on the natural resources and food production in particular. India food production and supply depends on number of factors ranging from health of agriculture soil to irrigation needs, effective fertilizations cycle to food supply to market, processing, storage. An estimated 5 – 16 percent of perishables India produces annually is wasted even before it reaches the end consumers.	Provide a solution to make Indian agriculture more productive, and food supply less wasteful, minimize pilferage achieving food security.
IoT	**IDM-07 : Improving Retail Experience through IOT** India is one of the largest consumer market. With the influx of fast internet and ecommerce platforms, Indian brick and mortar shopping experience is changing into mobile shopping. More and more consumers are preferring mobile shopping and avoids trip down the shopping mall.	Explore the usage of IOT devices and technologies that can help improve the Brick-and-mortar experience for the consumers and improve the sales.
Blockchain	**IDM-08 : Home Loan Lending Experience - A Cumbersome Experience** It currently takes and average of 42 days from submitting a home loan application to reaching settlement. At each point, you're dealing with professionals like mortgage brokers, bank officers, solicitors and real estate agents, each adding their own time and fees to the home loan process. These professionals are also stuck completing administration tasks that could be completed by a computer. For example, banks need to check your asset-to-debt ratio, while conveyancers need to complete a title search and transfer ownership of the property. What this leaves you with is a long and drawn-out process. Of course, the checks and balances required to get your application assessed, such as checking your ID and credit history, are necessary.	An answer to our question - With all of required customer (generic, financial) information already available on secure online databases, why are we left paying the fees of our archaic banking and regulatory system?
Blockchain	**IDM-09 : Patient Data - How healthy is our health related information** Patient should be put in complete control of who accesses her record and who can make changes, she should be able to monitor the edits such as new diagnoses, or even limit which providers are allowed to access sensitive information such as mental health data. Most of the health data is in individual silos and is not readily accessible by their 'network' partners engaged in the care of their patient. Patients should not be responsible for toting files back and forth between multiple appointments or accurately recounting the recommendations of one specialist when visiting another. Medication reconciliation is one of the most difficult and dangerous patient management tasks. Even when patients can accurately remember all of their medications, errors in medication lists are shockingly common. If one provider writes a prescription that is identical to the recommendations of another clinician, there is a need	Provide a solution to streamline the health related information and make a pleasant experience for the patients and the support team.

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	to flag the duplication and prevent the patient from doubling up on the same medication.	
Blockchain	**IDM-10 : Do we win our Consumer Trust in the Organic farming SCM** Organic farming does not use chemicals, synthetic substances and pesticides. The supply chain infrastructure of organic products is also very different, the identity of the organic produce has to be preserved throughout the production and distribution channels. The farmers and producers also run the risk that their produce may not meet the certification standards. These differences in practice imply higher costs and organic products command premium in the market due to this. For the consumers, besides being motivated by environmental concerns and healthy lifestyle, the consumer is willing to pay this premium so long the checks and balances in the supply chain gives confidence with regard to the authenticity of the organic characteristic of the product. Currently, the consumer has no means to independently verify the origin of organic produce, she is not able to trace the journey of the product from the farm to the fork.	Provide a solution to generate confidence among the masses that the product they are using is 100% organic.