Apogee Innovation Challenge
AIC-2019

WHAT IS AIC?
AIC is a unique college event aimed to provide a platform to students to work on real industrial problems while being in the college itself.

HOW DO I BENEFIT FROM IT?
Except the enormous amount of experience you gather about the actual working of industry, AIC has lucrative prizes to offer. Get a chance to win huge cash prizes and procure Summer Internships at leading global brands.

APOGEE INNOVATION CHALLENGE

GE Healthcare is an American multinational headquartered in Chicago, Illinois. The company is a manufacturer and distributor of diagnostic imaging agents and radiopharmaceuticals for imaging modalities that are used in medical imaging procedures.

GE Healthcare also manufactures medical diagnostic equipment including CT image machines.

GE Healthcare

Background: In Operating rooms, we use anesthesia machines to help (and to keep) patients breathing and anesthetized. During regular breathing, human beings produce CO2 which is released into the atmosphere. In OR, we use a closed loop circle breathing system that includes sodalime to remove CO2 produced by human beings. The closed loop is mandated as it would not be good to release inhalation anesthesia agent into atmosphere –anesthetizing the doctors /caregivers in the OR in the process.

However, the reaction between Co2 and sodalime produces both heat and moisture. This moisture collects in the tubes carrying gases to the patient and impacts accuracy of flow sensors used to control the flow of gases to the patients.

Problem Statement 1 (Pharmacy)

Find a low cost alternative solution to remove Carbondioxide from the closed loop breathing system that
(a) does not reduce the flow sensor accuracy (as it is today due to the
moisture production with the use of Sodalime)
(b) is lower or same cost as using Sodalime on an ongoing basis
(c) which does not affect the flow of gases to the patient –resistance offered to
the patient during exhalation.

Problem Statement 1 (Pharmacy)

Background: During the case of malfunction of any GE device, the field service engineer (FSE) visits the site to troubleshoot and solve the issue. In a few scenarios, the turn around time is high as the FSE would be having a pile of customer complaints to solve and also the travel time is high as the customers could be remotely located.

Problem Statement 2 (IT)

Develop a chat bot package which could run on product/cloud which does the initial sanity check, troubleshooting so that issue could be pin pointed or simpler problems could be solved without FSE intervention.

The package should be customizable to each product and accept the product's fault isolation procedures (FIP's), frequently faced problems (from previous field data) and their solutions as the input and should be able to assist the customer/FSE in decreasing the time required the service the product.

Problem Statement 2 (IT)

Summer Internship for members of the winning team.

Company signed certificates for runners ups.

Rewards

- **To register, visit :**
  www.bits-apogee.org/aic

- The solutions need to be mailed to aic@bits-apogee.org before 15th March 2019. **In case you are shortlisted, you may improve upon your final presentation.**

- The final presentation will take place in APOGEE 2019 (29th-31stMarch) and the exact date and time will be conveyed at least 24 hours prior.

Registration Steps

- **Registration closes - 1st March 2019**
- **Initial Submission - 15th March 2019**
- Top 10 shortlisted teams announcement - 20th March 2019
- Video Conferencing Presentation - 29/30/31st March 2019
- Final Result Announcement - 15th April 2019

Deadlines

- **The solutions presented will be the sole property of GE Healthcare and it may use it for its own development purposes.**

Terms and Conditions

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