

Hackathon 3.0 Problem Statements -

1. Take CoEP hostel admission process online -

Each year hostel admissions in CoEP happen through submissions of paper-based applications and through a lot of human intervention. Take the entire process online. Sub parts include, but not limited to, -

- a. portal for submission of applications by students interested in taking hostel admission.
- b. querying CGPAs of interested candidates through a central database and preparation of a merit-based branch wise main rank list and waiting rank list, separate for girls and boys.
- c. admission-day procedures - portal for submission of roommate data in order of merit list and confirmation of admission.
- d. admissions for waiting list students based on remaining seats.

Factual data will be provided on the day of contest.

Human intervention in this procedure should be minimal yet the hostel admission procedure should be as smooth as possible.

2. Skill development amongst economically backward class -

Technology can make lives better. Especially for economically backward class, gaining a skill can mean higher employment opportunities. Create a solution for the people belonging to this section of society to acquire new, essential or employment-driven skills. A central hub providing access to various resources, classified into appropriate categories and subcategories is appreciated.

3. A neural network that outputs headcount from a crowd image for disaster management -

In its each iteration, Kumbh Mela attracts thousands of devotees, jam-packed into a constrained space. Disaster management teams need to prepare in accordance with the number of people attending any such gathering. Given an image of a crowd build a neural network that outputs number of people attending the gathering. You can use any publicly available dataset for your training.

4. Matching exam writers with differently abled students -

Each semester local schools of Pune need young, enthusiastic college students as exam writers for their differently abled students. Create a portal for schools to submit such requests, college students to register as volunteers and efficient matching between the two. You can create a dashboard for volunteers to see upcoming exams which need writers, booking of slots, handling emergency cases, etc.

5. Convert handwritten government documents in Devanagari into corresponding soft copies -

Optical character recognition systems exist for Greek alphabets. Create an OCR to convert handwritten government documents in Devanagari into legitimate soft copies for the Pune Municipal Corporation. Maintain a central database of the documents classified according to government needs. Extra points for efficient and smooth queries.

Be imaginative, be creative in your solution for any problem statement you choose. Robustness of your solutions will attract more points.