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Track 1. Healthcare and Social responsibility

PROBLEM STATEMENT 1 ───────

Indoor fitness during pandemic

Lack of motivation and limited access to facilities can make maintaining an indoor fitness regime difficult. In the spirit of a healthy lifestyle during the pandemic, implement technology and use your ideas to help you work (out) from home.
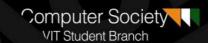
PROBLEM STATEMENT 2 ───────

Rapid SOS / Providing immediate assistance during emergencies when the emergency services can't reach on time

Waiting for the first responders to arrive is not always an option. When the situation gets dire, effective communication and support become essential to tackle the emergency. Can your innovation make a difference in these matters of life or death?

PROBLEM STATEMENT 3 ───────

Suggest solutions that would help increase women safety in high risk area

According to the World Health Organisation, one in three women have experienced some kind of physical or sexual violence. It is imperative that our cities become more secure and safer for women. Suggest solutions that would help increase women safety in high risk areas

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Track 2. Education technology

PROBLEM STATEMENT 1

Develop tools that would increase Productivity for students and teachers.

In the past 10-15 years we have seen the transition of things around us from offline to online, whether it's business, entertainment activities, daily needs, and now even education. Productivity tools have been a success with businesses and firms. Develop productivity tools for students and teachers in any domain of your choice that can achieve the same success in the educational field in the future.

PROBLEM STATEMENT 2

Create solutions to spread knowledge surpassing language and ability barriers.

Education to a man is what a strong foundation is to a building. It is of great importance in one's life, and should be accessible to all. There has been progress in innovations made towards the education and development of specially abled individuals but there is still great scope to do more. Come up with solutions to make conventional to include special needs in conventional education

PROBLEM STATEMENT 3

Solutions assisting the spread of digital learning (outside formal institutions like schools/colleges/coaching) (offline community learning)

Education has evolved from the traditional slate and chalk way of learning. The learners of today share ideas with their peers and use the digital community to their advantage. Develop solutions to encourage healthy competition and facilitate community learning amongst students.

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Track 3. Defense and aerospace

PROBLEM STATEMENT 1

Drone (swarm) & UAVs navigation system and/or solutions around them (new approaches).

From emergency rescues and data collection to wildlife photography, drones are becoming a tool of choice. Smart drones with built-in safeguards and compliance tech, smart accurate sensors, and self-monitoring are the next big revolution in the drone industry. Work on ideas and create tools centered around drones

PROBLEM STATEMENT 2

Devise tools that make observational data more accessible for use by scientists, decision-makers, and the PUBLIC.

The lack of refined authentic statistical data as well as an inability to easily access it has led to the spread of a wildfire of misinformation. Make the best out of your technical skills and create tools to refine and present this raw data for anyone to use and build applications.

PROBLEM STATEMENT 3

Online Intelligence Gathering and Analytics Tool

The Internet is the town square of the global village" and caters to any and everyone in the world. We see that tracking the web for specific keywords/messages/emails can help detect not only the social, political, and cultural aspects of a targeted audience but can also identify threats to national security. Build tools to identify analyse this data

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Track 4. Open Innovation

Imagine better products, entities, processes, and markets not restricted to one sphere of influence, but emerging from everywhere. With the barriers to creativity made permeable, everyone can help build something significant. Rooted in the belief that collaborations lead to better results, enter Open Innovation: a track that looks for solutions to problems from any domain

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PROBLEM STATEMENT 1

Lead generation tool for sales

GoComet's sales team perform cold-calling and other cold-outreach by shortlisting top companies in a given sector such as Pharmaceuticals, Steel, Automobile, FMCG, Checmial, Textile, etc searching their top personnel and decision-makers' (Head/Director of Logistics, Head/Director of Procurement, CFO, CIO, COO, CEO)

Current Process

1. We have a list of companies grouped by country and sector

Example:-

- Textile companies in europe
- Enerpat Group UK Ltd. Office in Essex, UNITED KINGDOM.
- White Cross Rubber Products Ltd. based in Lancaster, UNITED KINGDOM. J&D Wilkie Ltd.
- Mastercut Cutting Systems.

- Sintex, a.s.
- Ningbo Sinobaler Machinery Company Limited. ⊠
- Hydraulic Recycling Machinery
- Jovisa, S.L
- EuroSMC S.A.

2. Given a Company Name (Example: J&D Wilkie Ltd, Ningbo Sinobaler Machinery Company Limited, EuroSMC S.A.) Fetch a list of potential decision-makers (Head/Director of Logistics, Head/Director of Procurement, CFO, CIO, COO, CEO, etc) from the company using the company website and other social media platforms such as LinkedIn.

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Current Process

3. Fetch all possible details of the above employees of the company and create a master against the company name. Must have fields include LinkedIn Profile, Email, Contact Number, and Designation.

4. Our Sales team contact the Decision Makers through LinkedIn and Contact Number.
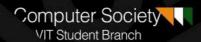
Requirement

GoComet wants to build a single-page application for its sales team. This application will give a single view of information of different industries like Pharma companies, chemical companies, steel companies Etc. The sales team can see all the information from a single page and it will help them to contact that company directly using that web app.

Expectation

The Application will have industry and company names pre-fed into the system. The Sales Team user will select the industry and company. Once the user clicks on 'Get Info', the application will display all the Decision Makers' information which includes but is not limited to Name, LinkedIn Profile, Email, contact number on the application page. Provide useful filter for same.

Create a dashboard with useful information considering UI/UX from a sales user's perspective. Assume suitable information as and when required to enhance the solution
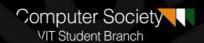
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PROBLEM STATEMENT 2 ───────

Procurement System

Manufacturing and Pharmaceutical companies such as Prestige, Sun Pharma require a variety of raw materials for their products. These raw materials are sourced from multiple vendors (a single type of product/raw material can be sourced from more than one vendor). The agreement for the product is contracted in advance and for a specified duration such as a month, quarter, or year, i.e. every agreement

Keywords

1. Product: Raw material used by the manufacturer. There will always be multiple vendors for a single product

2. Product Master: Internal Master/list of all products used by the manufacturer

3. Vendor: Sells the raw material/product. A single vendor can provide multiple products

4. Manufacturer: Uses raw material to produce finished goods ⬚

5. Agreement: A mutual understanding between Vendor and Manufacturer regarding the cost per unit for a product, start and end date of the agreed-upon cost, delivery responsibility. An Agreement consists of
a. Total cost per unit
b. agreement start-date
c. agreement end-date
d. delivery mode: either by vendor or pickup by the manufacturer.
6. RFP: Request for Proposal / Agreement made by Manufacturer and sent to Vendors

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Track 5. GOCOMET Industrial Collaboration

Current Process

1. The Procurement Team identifies all Agreements which will be expiring in the next 15 days.

2. Procurement Team Floats a new RFP among the vendors through email with a deadline

3. The vendors respond to the RFP by replying to the email with an agreement

4. The Procurement team does not accept any Agreement beyond the deadline

5. Upon receiving the Agreement, the procurement team has an option to negotiate by submitting a counter/target price per unit

6. Once the final Agreement rates are received from all vendors, they are compiled together and one or more Agreements out of all the received Agreements are selected by the Procurement team.

Requirement

You are expected to create a web application that would digitize the above process bringing all the stakeholders on a single platform. The above process takes around 45 minutes for one Agreement and with the help of a web application and your creativity, you can reduce the time to 15 minutes per Agreement. Assume suitable information as and when needed.

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Track 6. Industrial Collaborations Powered by Dyte

PROBLEM STATEMENT 1 ————————

Dyte provides an SDK using which you can integrate video-conferencing in any application. dyte is currently being used via Ed-Tech platforms for holding classes on their websites, telemedicine companies to connect patients with doctors, chat apps to connect sales representatives with customer support, etc. Build an app/website that uses live video communication with the dyte SDK for any such use-case.

Useful Links:
Documentation: https://docs.dyte.in/docs/getting-started
Web Integration Example: https://github.com/dyte-in/web-integration-example
Developer Portal: https://staging.dev.dyte.in/

PROBLEM STATEMENT 2 ————————

Dyte is a video-conferencing platform that features interactive plugins for various applications. You can use plugins to collaborate amongst participants of the meeting without having to leave the meeting window. We have deployed some existing plugins, such as the Chess plugin and the YouTube plugin, which you can check out on https://app.dyte.in.

The documentation for the dyte Plugin SDK used to build these plugins is available here: https://docs.dyte.in/docs/overview-3.

Use the plugin SDK to build new plugins which may be used either for fun or for useful collaboration among team members. These include (but are not limited to) fun games that you may play with your friends in a meeting or tools which may be useful while you're working with your team, that prove more effective than just sharing your screen. You can make multiplayer games, remote work apps, e-learning apps, or any other application that take advantage of real-time collaboration.

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Track 7. Ethereum industrial collaboration

Teams are free to innovate and develop cross cutting solutions to problems in domains of their choice. Your project could aim to solve problems that affect the daily lives of common people, or could be one that revolutionizes processes at the global scale. The only requirement being your project must be powered by Ethereum technologies.

Computer Society
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