



PROBLEM STATEMENTS

- 1) A botnet is a network of compromised machines/computers that communicates and coordinates their actions by Command & Control (C&C) or by passing messages to each other (C&C might be built into the botnet as P2P). Many host /network approaches have been proposed to detect botnets. They employ signature-based, anomaly-based, data mining approaches, etc. to detect botnets. When the botnets are detected by these approaches a huge amount of financial losses, data leakages, etc. has already taken place. You need to design a system that can detect if traffic is coming from a genuine user or a botnet.
- 2) Design an equation solver that will take an image and identify the handwritten or printed mathematical equations and try to solve them. The equations can be complex, linear, quadratic, matrices, etc.
- 3) Develop a digital signature system for authentication and signing of documents for the internal use of an organization. Employees will get an eToken generated which will contain the digital signature corresponding to the employee. The system shall authenticate the user using the public key of the user stored in the server and private key from the eToken of the user. Any document to be uploaded on the server should get signed on the fly via the user's private key and the Server should be able to verify the integrity of the Signed document via the public key and should then only allow the saving of the document on it.
- 4) Develop an app that allows exporters of small consignments to find and book available spaces in partially filled cargo containers nearby. The app should provide registration

to local logistics service providers (rail/road/ship/air) with access to their space availability, in real-time. Service providers should be able to apply for registration through the app, however, approval should be a result of an inspection and the quality of data provided by the service provider. Provide self-registration option to traders—importers and exporters. Show the available space, container-wise, to all registered traders and logistics service provider Traders, they should be able to book the space by clicking and making payment for space online and an Online chat window between traders and logistics service provider.

- 5) A desktop application that can let you control and access your Mobile device remotely. The application should be able to receive notifications from your device and have the capability to reply or act, If notification allows, to them directly from the Desktop. The application will be able to access the device-specific features like real-time GPS location and camera feed and have capabilities to manage, download or stream the media files present on the device.
- 6) At present, there is no platform to connect students & staff all over India. A platform/portal where students could put up their projects share their problems contribute to projects help in academics suggest new ideas just come together for any possible work. This will help them for all over development inform team about current advances in curriculum's etc. Every new project or just a Project Idea or just a solution to a simple mate's question should get some points or some form of credits (Like upvotes in Quora). In this way, we could gamify everything & make it really interesting.
- 7) This application shall aim to create a database of the Eating Joints falling within the Origin and Destination Points of the journey and placing the orders as per the available Menu at particular Eating Joint with the time of Service.
- 8) Creating an app for Windows/Linux users for users that have a disability in their hands (handles or armless). It is very difficult for people without hands to work on the computer. Develop an algorithm that can help these disabled people without hands to control the computer using face gestures and voice commands. We must try to resolve this problem. The system must activate user voice and moves screens/ windows using

face gestures and opening/closing windows, documents can be done through voice commands.

- 9) Design a vulnerability scanner for websites that should automatically parse through the APIs to identify which ones may be exposing the system to danger. A vulnerability database is the list of known vulnerabilities the scanner will use to spot potential problems the more information the scanner has, the more accurate its performance. Once a team has a report of the vulnerabilities, developers can use penetration testing as a means to see where the weaknesses are, so the problem can be fixed and future mistakes can be avoided. When employing frequent and consistent scanning, one will start to see common threats between the vulnerabilities for a better understanding of the full system.
- 10) You have to create an all in one app where you can have complete smart services for university-related to cleanliness lost & found canteen orders event notifications etc. You think standing in the queue for ordering food and then waiting for the food to get ready is wasting your time? It is the same problem for everyone. How if you could just order the food earlier(after the lectures/before reaching the canteen) itself and the food gets ready before you get there. So you've found an earphone and not sure where you're supposed to report it? Found dirt in your classroom and don't know the appropriate authority to report? Could we just directly report this in the app and the appropriate authority will take care of the situation. The application should be able to handle all of the above-mentioned issues.