

Projects & Ideations

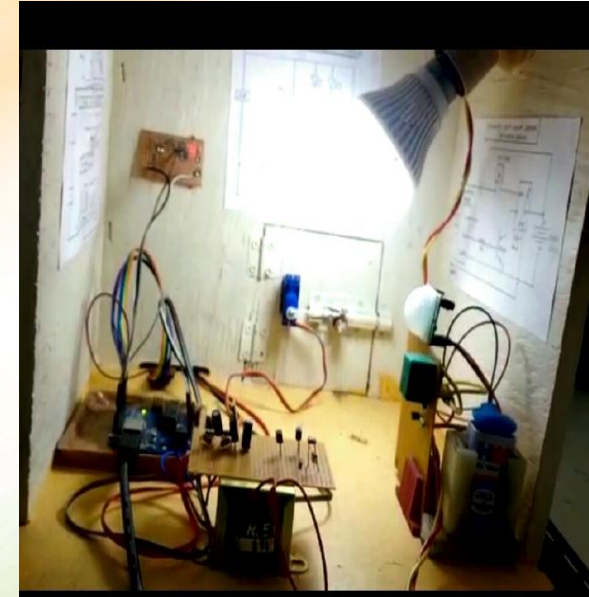
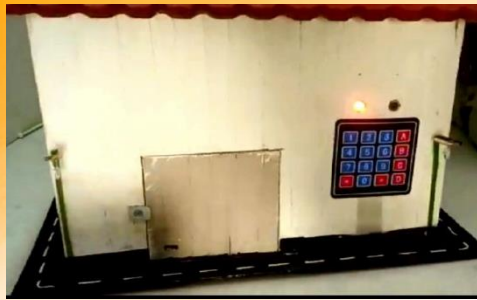
The Projects and Ideations are very quintessential aspects for any student. For me, both - implemented project as well as an Idea; are equally important as it brings immense knowledge, hands-on experience and joy of innovation-creativity to me.

I, hereby present some prominent ideas, which I've planned / implemented along with my Friends – Team members.

All of these Ideas are derived and inspired from some existing Technologies, but we tried to mold it in such a way, so that they can be fruitful to society.

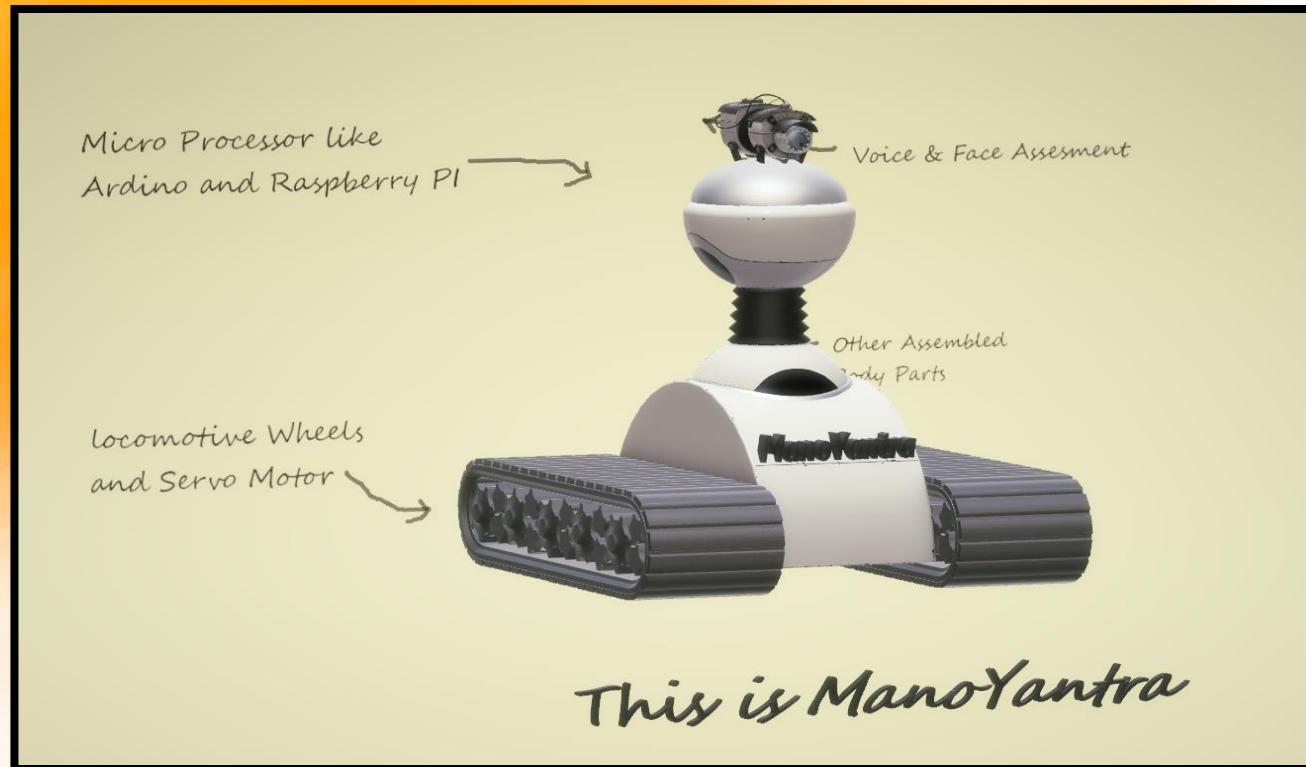
We've presented these Ideas in various forums of College, so they are on the records... And this list is going to continue forever as, **INNOVATIONS NEVER STOPS. . .**

SMART HOME AUTOMATION PROJECT



It consists of **Keypad Lock system**; and **Fingerprint-at-handle & Iris recognition** is our future updation. **Smart Lighting system** is made using **PIR, LDR sensors**. PIR sensor based structure would detect presence of living organisms and would turn on the lights, while LDR sensor was used for controlling Street light polls and other direction lights, that needs to get operated in dark; here **Mood based light control system** is our future updation. Last but not the least, **Smart Controlling System**, which is too our future implementation; Here all the electric devices like Fan, Lights, Doors, Gates etc. are made to get **controlled by Mobile** Operation based stimulus. Besides these, we are also seeking for better affluence based modification ideas...

MANOYANTRA – An Emotion Based Robot Idea



We describe a different approach to robotics in which emotions are at center-stage playing a much larger role than just that of facilitating emotional expression. Drawing inspiration from work in psychology, neuroscience, and ethology, we have presented an Idea to develop a **computational framework that captures important aspects of emotional processing** and integrates these with other models of perception, attention, motivation, behavior, and motor control. We have followed this approach to control several autonomous agents, including a physical robot that is capable of emotional expression while exhibiting robust and effective behavior.

- As per IEEE International Conference on Intelligent Robots and Systems dated on 17 to 21 Oct. 1999, The realization of emotions should be a central aspect of any intelligent machine.
- These robots have to make decisions depending on their sensor data. Because of this it is very important to use the emotional component in a robot system that should work with maximum efficiency.
- Nowadays, worldwide several research projects focus on the development of emotional control architectures for robot systems. In addition to this, We tried to come up with an another modification, that is to **control the Robot with our own emotions and mind; with the help of Bio-sensing Neuro sensors, Mindwave sensors and EEG headsets etc.**
- The preliminary problems to be solved by this idea are overcoming the lack of efficient AEI(Artificial Emotional Intelligence) systems, availability of optimized personal Robotic assistants .
- Moreover, it can also be an amazing Emotion based Music Player with prolific working, and also as a mindfully developed EBC(Emotion Based Control Architecture) toy.
- Lastly, this is an idea which can be made more fruitful, as per over need and convenience, and to explore it as much as we can, by simply getting into it .

MANOYATRA

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graph TD; MANOYATRA --> ACTIVITIES; MANOYATRA --> AREAS_OF_USE[AREAS OF USE]; MANOYATRA --> MADE_UP_OF[MADE UP OF];
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ACTIVITIES

- Effective Digital Assistance
- Brain Control Schema
- Additional useful features
- Affluence based Modifications
- Voice & Face Assessment
- Advanced Robotic Aide
- Personal Digital Robotic Assistance

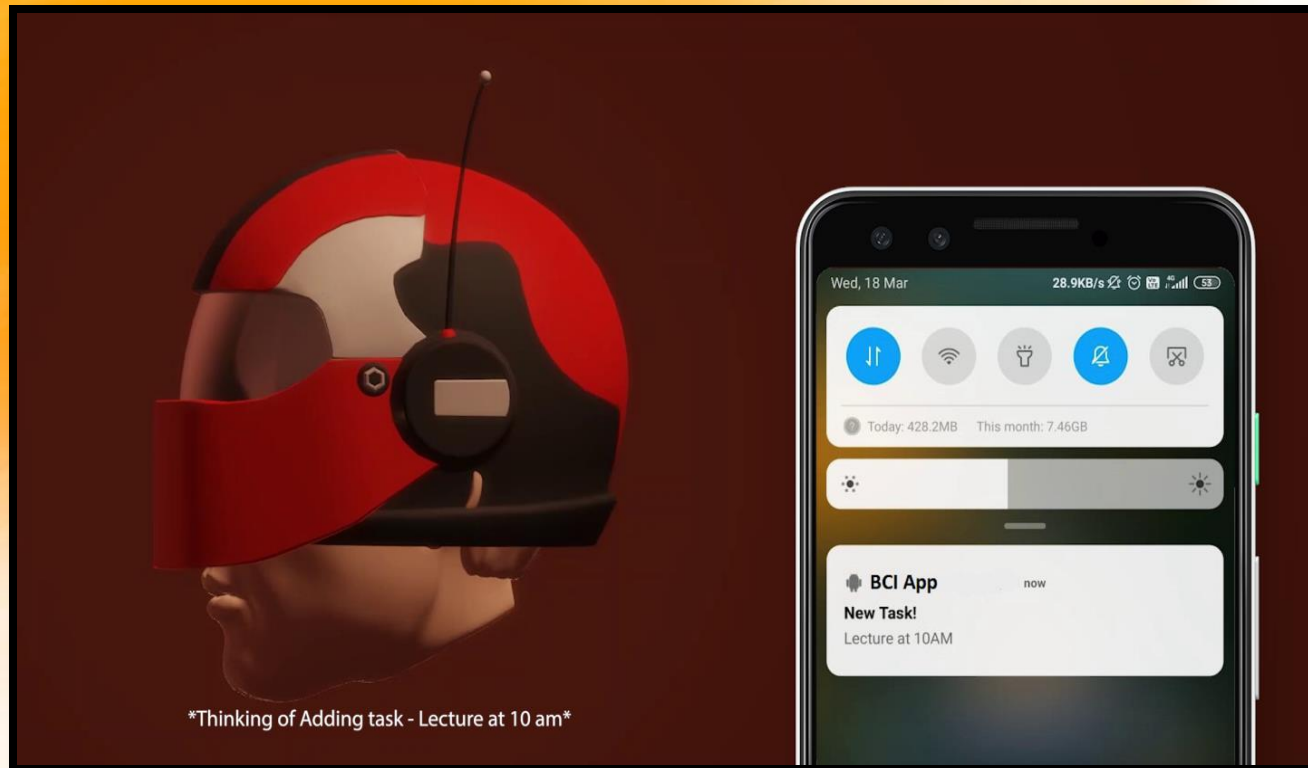
AREAS OF USE

- Large scale industries
- Technological MNCs
- Research & Development wing
- Games & Education
- A.I sectors
- Personal Usage
- Corporates

MADE UP OF

- Neurosky Mindwave Mobile
- eSense Meter, EEG analyst
- Micro controllers
- Robotic Parts assembled as per need
- respective Hardware-Software
- Servo motors, Sensors (e.g HC-SR04)
- Apt programming

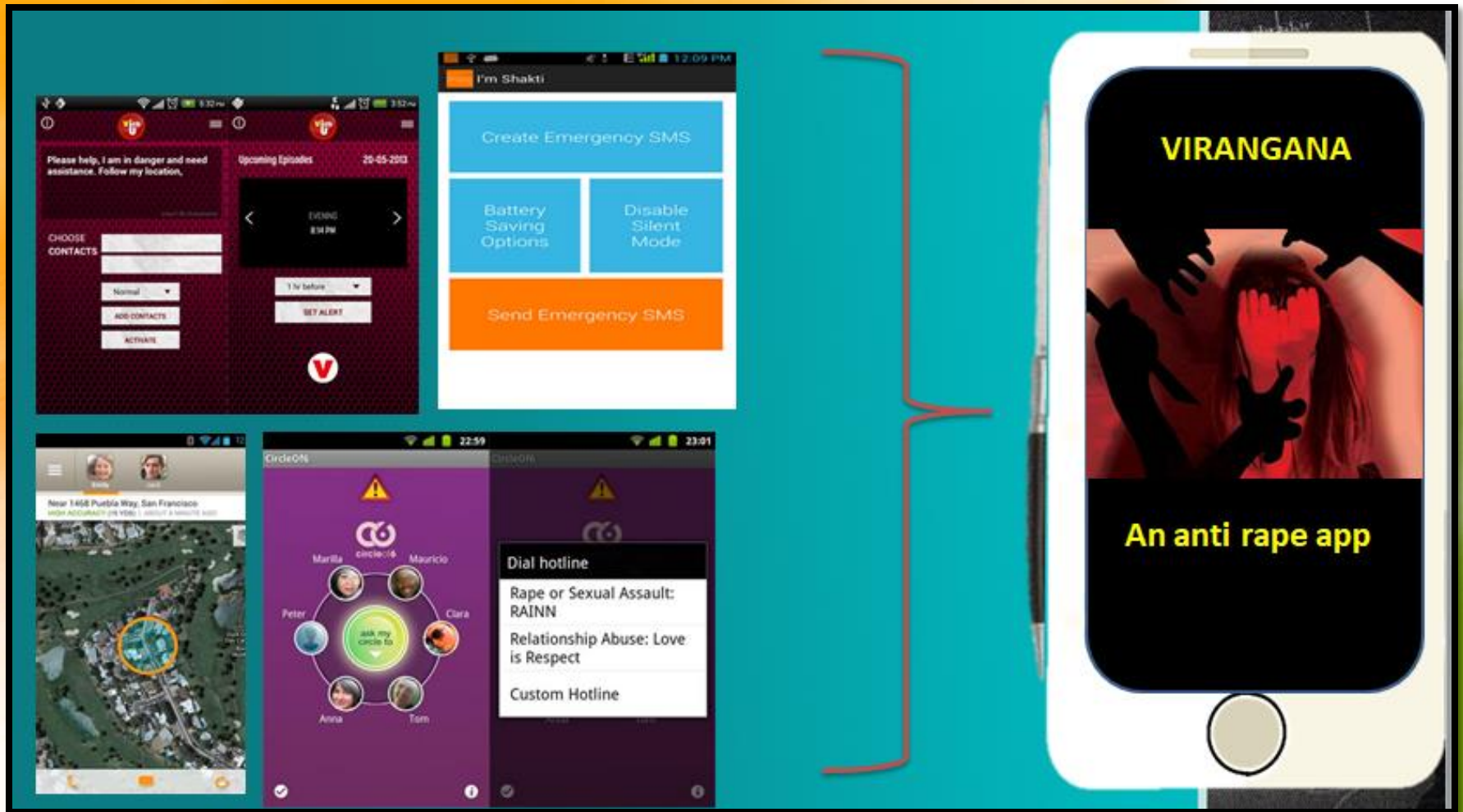
BCI based To –Do –List Idea



- Rough idea by my friend Karan Gadani, on which we worked more in detail.
- Over recent years, brain-computer interface (BCI) has emerged as an alternative communication system between the human brain and an output device. Deciphered intents, after detecting electrical signals from the human scalp, are translated into control commands used to operate external devices, computer displays and virtual objects in the real-time.

- About five decades ago, EEG-BCIs used computer cursor movements to communicate user intents for patient-assistance in various applications but the applications are now widespread as: machine learning, in different fields of neuro robotics and neuro prosthesis, mobility assistance, assistive-robot devices, Personal Digital- Robotic Assistance, Artificial Intelligence, various Computational control schemas and many others are still emerging out.
- **Here, we proposed an idea to design such a computational Architecture of Check list that works on receiving a salient idea/notion/thought regarding any job/work from human brain and tried to develop methods to detect with EEG when a subject perceives a salient stimulus.**
- And eventually, with the help of all intermediate structure all stimuli get organized into To-Do-List manner; with respect to User's will and want. This can be an important and quintessential aspect of Personal Digital Robotic Assistance, as it would surely help into making our lives and jobs more organized.
- Many other salient modification and features might be updated in order to get more fruitful and effective results. **This Check list can also be edit and update as per the rising consequences and affluence.**
- Lastly, we can explore, nourish and nurture this more; by just simply getting into it.

VIRANGANA – An anti Harassment App Ideation



It will be containing all the features provided by various safety apps, along with few salient features too

- By providing facility to instantly send an SOS(save our soul) alert to contacts and send an alert to your chosen contacts. On top of that, the app can **connect you to the proper authorities** for an emergency, or even just for relationship advice.
- Triggers an accurate GPS location to short listed contacts and also enables to track the live journey.
- **Most uniquely**, it will consist an architecture in which, interested users signs up as members and pledges to help the needy. And in any aroused situation, when any victim triggers buzz, then it notifies to all the nearby users, in the close area and shares the location of victim to them. This enables the public to gather and help the needy and also let the public to punish the culprits
- **Will provide a list of hospitals and police stations** that are nearest to you
- Complementary features to connect any smart watch, bands etc.
- Here in addition to all those features, there will be a feature of generating heat maps.
- Also, the satellite image tracing method is to be introduce here
- **Enabling camcorder and microphone to auto start** itself and record the happening situation – by just giving a small signal [for e.g by pressing power button for more than 5 times]
- another prominent update will be that of introducing a safety **handheld knife**, that would be attached with phone or case or any such device – just like Samsung smart pen, that can be very helpful during defense & attack in hand to hand assault, but this idea is still under development & it is a future update as for now.

- Adequacy & convenient by providing immediate help to all kind of users.
- Sorted and relevant structure.
- **It will Provides basic legal aid to victim, so that victim can address the accused in legal way too, for admitting very effective complain.**
- **Quick communication to Police Control rooms, SHE team and other such authorities.**
- **It will surely help in bringing out the consequences occurring In front of public.**
- **could be Noble cause for Public interest & women development sector (Govt.)**

There will be also some provisions for scrutiny and verification, in order to prevent misuses of all these features. But primarily, it'll provide the basic help-aid, because the only motto behind this is to provide the help and support to the victim and to prevail legitimacy in the whole scenario.

ANIMESH SHASHTRAM – An open E-Library Idea

So this is a web portal based idea. This would be very own Library, that never closes. Here, all General & Academic books, Religious scriptures, Epics, Magazines, Novels and some rare/less available books and excerpts will be available under one roof.

Usually; Students, Aspirants, Readers and Researchers have to face the inadequacy for their stuff. But here by, we're trying to solve it up along with salient benefits and features like:

- Availability of required Books, Magazines, Excerpts etc. at nominal charges or some of them also for **FREE** [FOC].
- Non prejudiced, factual and neutral **Reviews** and **Summaries** on desired content.
- Open space for **Freelance Writing**, Blogging, content creation etc.
- General **Discussion panels** to-the-point; along with proper surveillance.
- Advanced bifurcated section for CAT, G.S, G.K & competitive Exams.
- Online premium **Quizzera**
- complete and **sophisticated materials**, brochures & pamphlets for competitive Exams.
- Notes, yesteryear's Papers, analysis and excerpts. Prolific News papers, **News analysis** and other downloads.

- Beside these, the portal should also possess some salient features like **monetization** for book uploaders, reviewers, content creators & freelancers.
- Moreover, it would've certain downloads and factual content at **zero** or **lowest possible charge**. Hard copies of book at discounted prize*
- Some rare testimonials, Documents and **unavailable/prohibited [ideal] content** would be available, under apt use.
- Some quintessential, costliest and also copyrighted content would be available under **FAIR USE DOCTRINE** {Copyright Act 1957}

If developed further ideally then it could be amazing Noble cause for social change and can also be considered in Public interest & Education sector (Govt.)

Things to take care:

- Prevention of misuse of FAIR USE DOCTRINE (Copyright Act 1957).
- Sufficient use of content under EDUCATIONAL PURPOSE.
- Avoiding Plagiarism and consent affirmation.
- Service between Uploader-Viewer according to certain circumstances.
- Necessary steps for providing service w.r.t situation, content, rights and law.
- In addition to this, there might be many undiscussed and unknown norms for the latter, that must be taken care of...

THE PROTOTYPE IS NOT YET DESIGNED... BUT THE WORKFLOW OF MONETIZATION WOULD BE SOMETHING LIKE THIS :



Let's try to understand through a Example:

- Kishan uploaded a very old book named as BHRUGU SAMHITA by making pdf of it, which is available to download by paying just ₹20 whereas its market price is ₹ 300.
- Now assuming some conditions are: one needs to upload minimum 5 books without getting paid, and there must be minimum 50 downloads on each of the uploaded books & certain other terms.
- Now after qualifying these views and downloads, the portal will pay Kishan 25% of price i.e ₹ 4 on each new download.
- So in this way, Kishan as well as the Viewer/Downloader would be getting profit
- There will be such same parameters for freelancers, reviewer etc.
- *Most important aspect to take care is of consent based publishing, fair use, educational purpose and some other approaches.*

**This list is surely to be continue as being a Student,
I'll always keep innovating, thinking,
experimenting and strumming my as well as
other's brains for new Ideas and approaches.**

**So these were some of my projects and ideations,
many are not yet published and many are not to be
publish as of now...**

TO BE ALWAYS CONTINUED. . .