

DESIGN PORTFOLIO

Bharat Sarkar

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BHARAT SARKAR



“Hi, I am studying design at IIT Kanpur, India. I believe in Human Centered Design and its use in problem solving and enhancing User interaction and User Experience. I like to think of next step of human engagement and development, and thus design products and services around it.”

MASTER OF DESIGN,
IIT KANPUR

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<http://www.behance.net/l3harat>
<http://grabcad.com/bharat.sarkar-1>

EDUCATION

High School	2005: CBSE	78.8%
Higher Secondary	2007: CBSE	74.2%
BE(Mechanical)	2011: AICTE	80.13%
M.Des(Product Des)	2012:IIT, Kanpur	9.75 CPI

EXPERIENCE

Engineer:	2011: R&D, Mahindra Research Valley	10 months
Internship:	2012: TYCKA DESIGN, Bangalore	2 weeks
Internship:	2013: ERGO DESIGN, Bangalore,	1 month
Industrial Training:	2010: Diesel Loco Shed, Itarsi	2 weeks
Minor Academic Training:	2010: AutoCAD, CRISP, Bhopal	1 month

SKILLS

2D software:	■ ■ ■ ■ ■	3D software:	■ ■ ■ ■ ■
Photoshopv CS6	■ ■ ■ ■ ■	Autodesk 3DS-MAX	■ ■ ■ ■ ■
Illustrator CS6	■ ■ ■ ■ ■	Catia V5	■ ■ ■ ■ ■
SketchBook Pro	■ ■ ■ ■ ■	Solidworks	■ ■ ■ ■ ■
Word and Powerpoint	■ ■ ■ ■ ■	Keyshot	■ ■ ■ ■ ■

Other Skills:
Design thinking, Human Centered Design, Engineering Design
Ideation, User research, Prototyping, Testing
Sketching, Modelling, Rendering

WORK EXPERIENCE

ERGO-DESIGN, BANGALORE

INTERNSHIP

Organization: ERGO-DESIGN

City: Bangalore, India Duration: May to July 2013

I worked in a team under the mentorship of a senior designer, for a client based in Coimbatore and did the interior layout design and Industrial Design of an Industrial Air Compressor. During this period, not only I could hone my skills and understanding of the design process but I also experienced real world design and how it relates to the complete product development process.



LIVE PROJECTS WITH FIRMS

HINDUSTAN UNILEVER LTD.

Design and development of a consumer product in collaboration with the firm is in progress.

*Details cannot be disclosed.



MAHINDRA RESEARCH VALLEY, CHENNAI

Employer: MAHINDRA AND MAHINDRA LTD.

Designation: Graduate Engineer Trainee

Team: Drive Away Chassis, Technology
Product Development Systems

Duration: Aug 2011- Jun 2012



Role: As a part of Mahindra Product Development System, I worked in a team in Chassis and Suspension System at vehicle level and learned the various methodology and tools like Catia used in designing the suspension of MUVs and SUVs. Thus I had an experience of looking at product development from the perspective of industries and product manufacturers.

TYCKA DESIGN, BANGALORE

INTERNSHIP

Organization: TYCKA DESIGN

City: Bangalore, India Duration: December 2012

As a part of the product design team I worked in collaboration on a Liquid Toilet Dispensing product design and development for Hindustan Unilever Ltd. as the client. I had an experience of the product design process starting from understanding problem statement and client interactions. While working with professionals on live project I got to learn the design approach and Industry practice.



DRAIR

Your Cloth Manager



40% faster drying

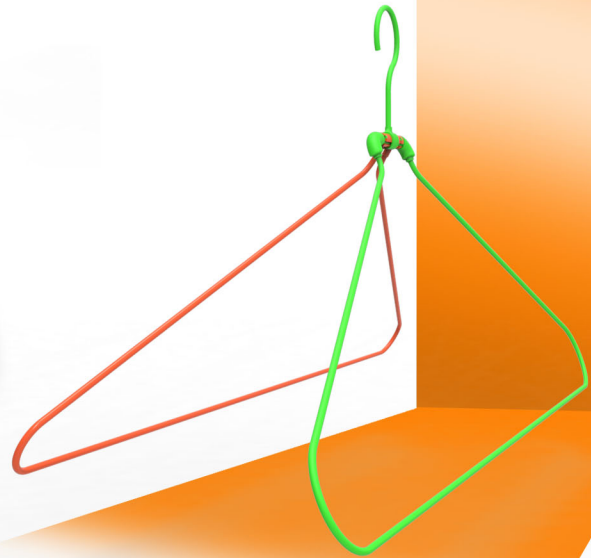
Stress free clothes

Aesthetics worth display

Hang multiple clothes

Redefining experience with cloth management

Patent Application in Process*



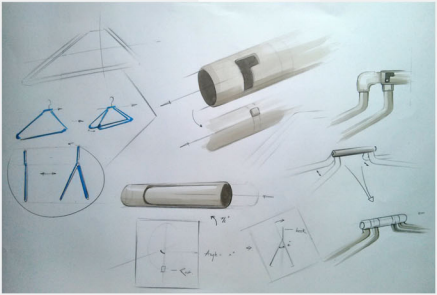
PRODUCT DESIGN

DRAIR

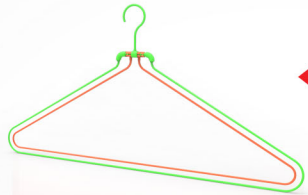
Your Cloth Manager



IDEATION AND CONCEPT DEVELOPMENT

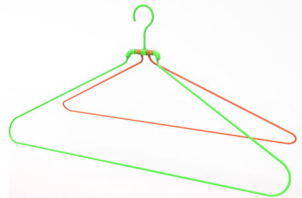


Redefining experience with cloth management



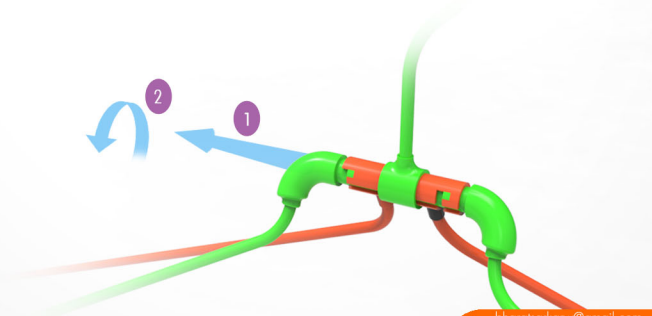
NORMAL MODE:

- USED AS A NORMAL HANGER
- EASY TO STORE AND STACK



STRETCH MODE:

- USED FOR EFFECTIVE DRYING
- FOR APPAREL DISPLAY
- FOR COATS ETC. AS FORM HANGERS
- FOR TWO SEPARATE CLOTHES AS WELL



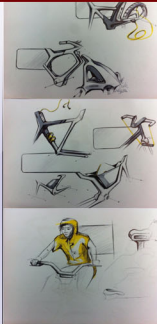
BICYCLE DESIGN

Commuting solutions for
Young professionals

As a part of a bicycle design workshop conducted by
TI Cycles, in a team of four we came up with different
concepts and then went on to make prototypes of a
selected few.



UNDERSTANDING BY DOING: TASK ANALYSIS



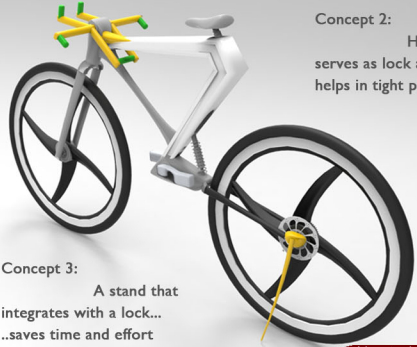
Sketches by Akash Mitra

ZIRCON

PRODUCT DESIGN

Concept 1:

A handle that
changes with the changing
roles of a commuter from
office to adventure



Concept 2:

Handle that
serves as lock and also
helps in tight parking spaces

Concept 3:

A stand that
integrates with a lock...
..saves time and effort

INNOVATIVE PACKAGING

Innovative Cardboard
Packaging Concepts



The development journey through Research, Ideation, Implementation and Iteration.



Live project with DS Smith Packaging, at TED MINT 2013, Sweden

CONCEPT 1



PROBLEM BRIEF: The edges and corners are more prone to damage and hence need additional strength.

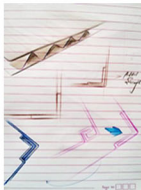
DESIGN FEATURES:

- Enhanced Protection on corners and edges
- Only one material used
- Easy to manufacture
- Cost Effective
- Environment friendly

The idea is inspired from origami and hence uses only folds to furnish 6 layers of cardboard at corners and three layers at the edges with negligible wastage.

DEVELOPMENT OF CONCEPTS THROUGH THE DESIGN PROCESS

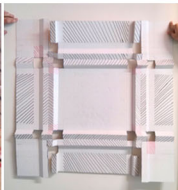
IDEATION



CONCEPT DEVELOPMENT



PROTOTYPING



TESTING



PRODUCT DESIGN

FLAT PACKAGING

Innovative Cardboard
Packaging Concepts



EXHIBITION

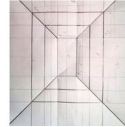


Live project with DS Smith Packaging, at TED MINT 2013 Sweden

CONCEPT 2

DESIGN FEATURES:

- Scalable design
- Inspired from the folds of Origami
- Only one material used (cardboard)
- Easy to manufacture
- Cost effective
- Environment friendly



This concept primarily deals with the issue of scalability. The packaging can be sent as a single sheet of cardboard with no wastage and the same sheet can be folded into packages of different sizes according to the product.

CONCEPT 3

DESIGN FEATURES:

- Protection on corners and edges
- Inspired from clothes
- Easy to manufacture
- Cost effective

In this concept the packaging is made out of one layer of cardboard with another layer of EPS in shredded form only at areas which needs more protection. The packaging can be prepared by applying glue at the required area and then applying a layer of EPS over it in shredded form.



ROCKnROLL

Set yourself free

Trendy cover to experience tangle free fires and hassle free music on the go



ROCK- Recoils the wires/ allows extension to required length



3D Printed Rapid Prototype



Recoil mechism



PRODUCT DESIGN

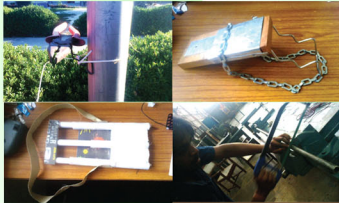
MECHANISED TREE CLIMBER

Designing products for rural

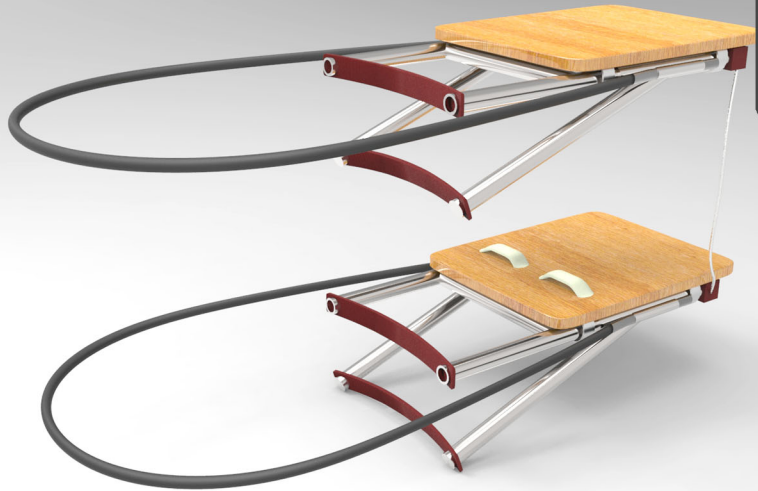


The job of coconut harvesting is difficult and dangerous

PROTOTYPING AND TESTING



IDEATION AND CONCEPT DEVELOPMENT



STEADY- ADDED SUPPORT BELOW
SECURE- SPRING LOADED MECHANISM
SAFE- BOTH PIECES SECURED WITH A CABLE

ATM REDESIGN

Product and interface design

To Improve the experience of ATM for all



What if using ATM were as simple as taking money out of your wallet ?



- Minimal Navigation
- Minimal Interface
- Secure &
- Fast



SCREEN 1

SCREEN 2

WELCOME नमस्कार



INTERACTION DESIGN



नमस्कार
मनोज जी

आपके खाते में ₹ 10,000 हैं

गंती स्टेटमेंट
प्लट करें

अन्य



₹

1,000



SBI e-Lounge

Public space design

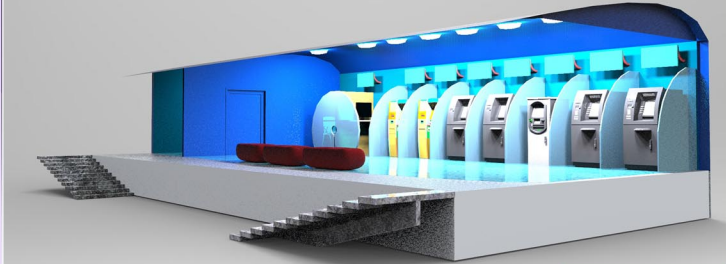
Space design for Minimum space and quick service



Designing modern banking environment



SPACE DESIGN



DOVA

Strategic Board Game



The packaging and manual

A Portable, playful and strategic board game



PRODUCT DESIGN

SHAPE

Visualization explored



CARDBOARD- CHEAP AND EASILY AVAILABLE
CUBE- BASIC SHAPE- EASY TO IMAGINE AND EXPLORE

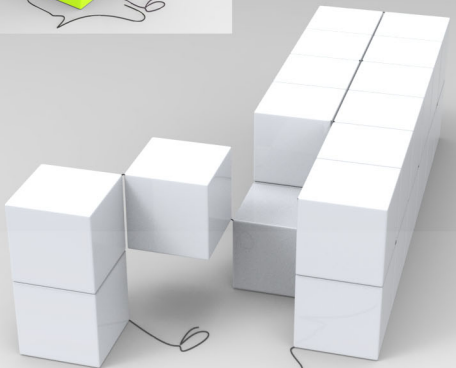
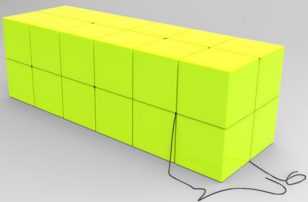


STRINGS- MAXIMUM FREEDOM IN ARRANGEMENT



SAND INSIDE- WEIGHT, STABILITY AND SOUND AS FEEDBACK

Playful means of enhancing 3 Dimensional visualization and eye-hand coordination in kids



PRODUCT DESIGN

PACKINNOVA

Creative packaging design



A WHOLE NEW WAY OF USING COSMETICS

PRODUCT DESIGN



ONE HAND OPERATION
SIMPLE AND ELEGANT

Video Link : <https://www.dropbox.com/s/sjoi79s6z1x4lvq/11.avi>

bharatsarkarw@gmail.com

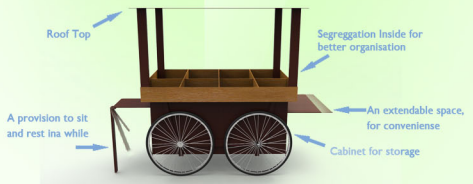
HAND CART REDESIGN

Designing products for rural



THE CONVENTIONAL CART THOUGH POPULAR HAS A BIG SCOPE OF IMPROVEMENT

According to the research people come up with make shift arrangements that suggest their needs and requirements and those just need to be converted into features optimally



A design guideline was compiled and a business plan as per the materials was prepared...



PRODUCT DESIGN

MODELLING AND RENDERING

DIGITAL DESIGN



-Autodesk 3ds Max
-Luxion Keyshot



PRODUCT DESIGN

MODELLING AND RENDERING

DIGITAL DESIGN



-Autodesk 3ds Max
-Luxion Keyshot

PRODUCT DESIGN

PLAYSTICKS

Engaging and playful application

CONCEPTS

Ever thought of having the whole screen as your playground? A platform to show creativity and have fun with the interactions between stick figures and you. A platform where your imagination is the key to creativity and fun. Why can't we have a platform where we can see that in how many interesting ways your phone can do wonders with your imagination and thoughts?

The app was design for entertainment purpose. It can really act as a stress buster in many situations. The simplicity of the app where the user just jot down something and the lively characters play with it can be fun because it engaged you with something refreshing within that 10-30 seconds of boredom you experience in a situation like waiting for someone, standing in queue, boring meetings etc. using this app in a situation like this can drove away negative thoughts out of impatience and irritation experienced by the user.

KEY BENEFIT

TECHNICAL FEASIBILITY

The technical feasibility has to be determined since no such application has ever reached such levels of interactions with the user drawn sketches, but the technological challenges seem achievable according to current research.

Scenario:

Sometimes we feel out of place in certain situation. For e.g in the Pictures shown, 2 people were in a serious discussion while the 3rd person seems like she could not get well in the conversation. So she played PLAYSTICK to pass time and most importantly enjoyed the moment which could have been an awkward situation. Her mind got devisted with positive attitude.



MOBILE APP DESIGNED AS PART OF USID- SAMSUNG DESIGN CHALLENGE

USID- SAMSUNG STUDENT DESIGN CHALLENGE 2012

CONCEPT 1: PLAY STICK

THEME
GAMING & ENTERTAINMENT



Existing characters ready to play with whatever you scribble on the interface.
Draw a simple ball, lines, geometrical shapes, etc on the interface and the characters play with it.

WIREFRAMES



TARGET USERS

All smart phone users, especially those who would play with their phone when bored.

EXISTING SCENERIO

There are no existing applications where your creations interact and become a part of the environment.

DO THE DOODLE

A playful and fun application

TARGET USERS

All smartphone users, from the kids to the old age people.

EXISTING SCENARIO

There are no such apps as of now and the very basic ones are mostly about only sketching.

CONCEPT 2: DO THE DOODLE

CONCEPTS

Everyone enjoys doodling and sketching ideas, and all of us like to share ideas with our friends or buddies. Why can't doodle and sketching be collective efforts and thus have anticipation and eagerness as elements of fun among two or more of your close friends. It's possibly more fun when you do things in a group of two or more, and moreover you can have your phone as your companion too when you are alone. It might even provoke thoughts and bring subjects out of thin air, subjects very abstract and thoughtful. So the result is highly unexpected.

KEY BENEFIT

- It adds a lot of value and also in a number of ways:
- The results can be thought provoking
- Can initiate really good discussions
- Can be very funny and interesting
- The interaction among friends increase

TECHNICAL FEASIBILITY

The requirement from the graphic and technical aspect is very less and thus the development of this application is very much feasible.

MOBILE APP DESIGNED AS PART OF USID- SAMSUNG DESIGN CHALLENGE

USID- **SAMSUNG** STUDENT DESIGN CHALLENGE 2012

CONCEPT 2: DO THE DOODLE

USER 1



Sketch without completing

SEND

STEP-1



STEP-2

RECEIVED
Guess and try to complete



UNLOCK

THEME GAMING & ENTERTAINMENT

USER 2



FINAL

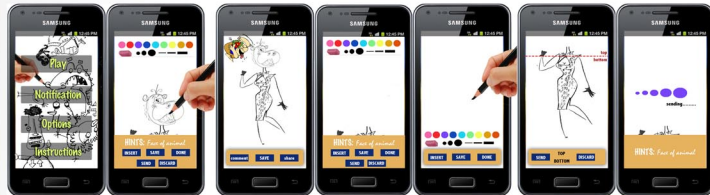


You can also play Solo/Multiple & see how weird Imaginations Can be.



Doodle your imagination and explore the funny side.

WIREFRAMES



APP DESIGN

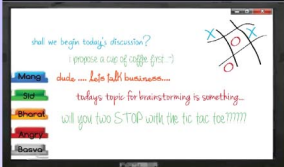
VIRTUAL WHITEBOARD

OZCHI 24 hr Design Challenge

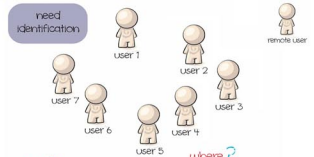
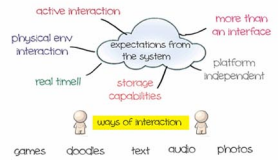
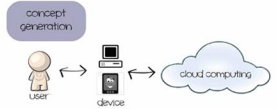
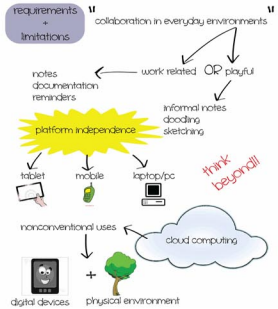
A virtual space on the cloud where multiple people can remotely collaborate and communicate in real time through doodling, scribbling, sharing media, sketching, and playing games



Final Wireframes



virtual whiteboard



- what?**
 - no common space
 - diff collaboration
- where?**
 - public places
 - offices
 - study circles
 - grp activities
- why?**
 - common platform
 - less redundancy
 - efficient coordination
- who?**
 - students
 - professionals
 - groups
- when?**
 - discussions
 - presentations
 - meetings
 - classes
- how?**
 - grp discussions
 - geog dist
 - less interactivity

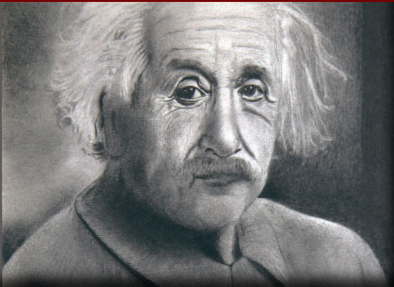


Journey ahead → feasibility & market study

SKETCHING

ARTS

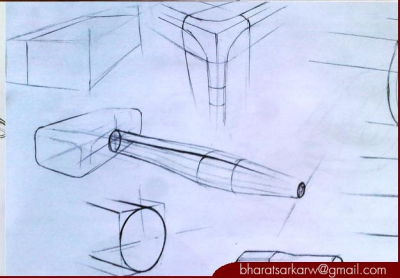
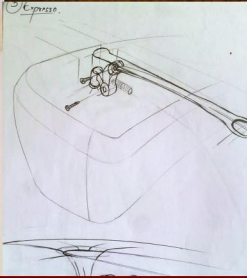
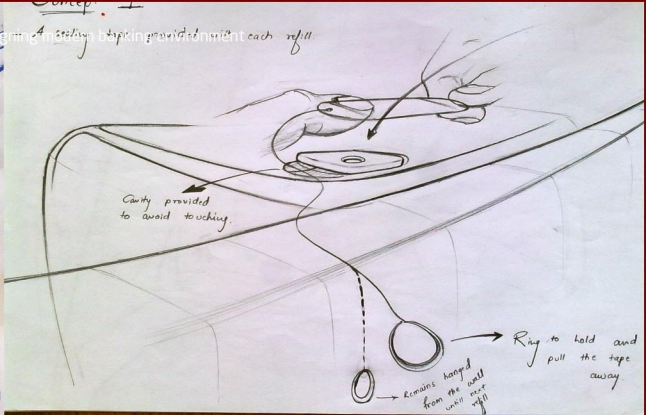
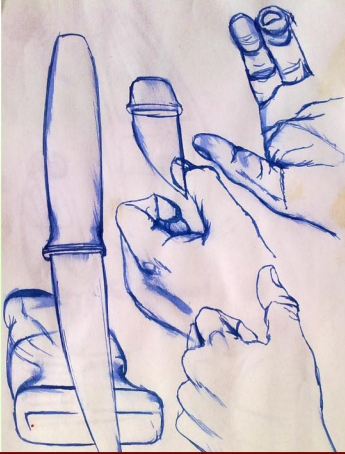
- Fine arts
- Graphite and charcoal



SKETCHING

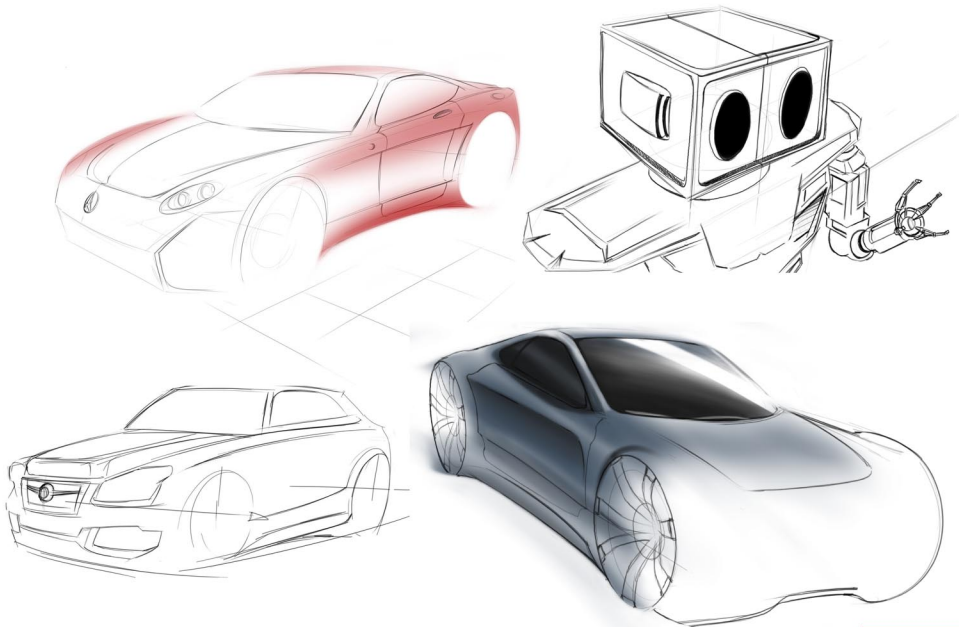
Ideation

- Ink sketching
- Ideating



SKETCHING

Digital sketching

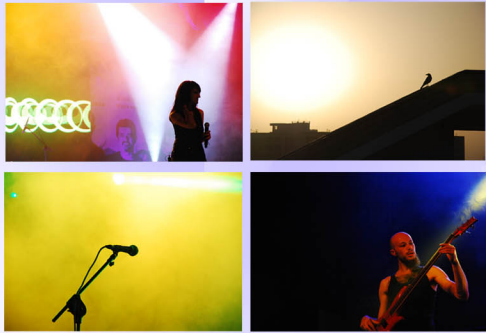


VISUAL COMMUNICATION

logos, posters, photography



Logo concept for RuTAG, IIT Kanpur



AWARENESS WEEK

STOP
LITTERING



AWARENESS WEEK

STOP
while you can



<http://www.dreamtofly.w> http://www.youtube.com/watch?feature=player_detailpage&v=5vezNGs11kc