


Human Centered Design: Rapid Prototyping



Storyboard Design Ideas Assignment

A storyboard presents a scenario that takes a hypothetical user from setting (a problem, need, or desire embedded in a specific situation) to satisfaction (an outcome achieved through a design that addresses the problem/need/desire). Storyboards show what a design enables the user to accomplish without specifying a particular user interface. A good storyboard begins by introducing the problem: what does the user seek to do? The subsequent panels walk through what the user does. It introduces how the user begins using the system, any exploration that they do, and how the design helps the user accomplish their goal.

As in the interviewing assignment, here you'll also be exploring opportunities to improve the transit experience. You're welcome, but not required, to take your design inspiration from your work in the interviewing assignment.

- **Review criteria**

Please review at least 3 peer assignments.

Design Ideas

- At least two ideas submitted (1 point)
- At least three ideas submitted (2 points)

Storyboards, each worth 1 point

- Storyboard submitted.
- Panel sequence of storyboard demonstrates the major steps/elements that an interface would need to fulfill.
- Storyboard conclusion addresses the transit problem identified at the beginning of the storyboard.

This assignment is worth a total of 20 points.

- Assignment

- Storyboards

Your first step is to settle on 3 design ideas that you'd like to storyboard. One good way to do this is to brainstorm a long list of design ideas and then pick your favorites from among them. Once you've settled on your three design ideas, it's time to make your storyboards. For each idea, you'll create 2 storyboards showing alternative tasks or users. This means that in total, you'll create 6 unique storyboards.

Each storyboard should comprise 5-8 panels and fit on two A4 or 8.5" x 11" sheets of paper. Computer-drawn work is forbidden; storyboards must be hand drawn. You will not be graded on illustration quality. The goal is human-centered content. Use a sharpie, or other thick, black marker for your drawings. The reason to use a thick, black marker is that it's easy to take a picture of. Also, it discourages fine detailed drawing because that's not the point of a storyboard.

You'll need to take a picture or scan your storyboards in order to submit them for peer review.

Feeling stumped about how to show your ideas visually? Check out "[Understanding Comics](#)" by Scott McCloud, and Amal Dar Aziz's excellent [Guide to Storyboarding](#).

As an example, the following storyboards both address the point of view "Through clever scheduling, homework doesn't have to be a time-consuming and dreaded process:" [Storyboard 1](#), depicts a way to prioritize tasks, [Storyboard 2](#), depicts a way to factor in breaks.

- What's this for? A UX agency perspective

by Mike Davison, Community TA and UX Project Manager

Agencies use storyboards to convey to clients potential solutions to a given problem....problems discovered during needfinding. Doing it this way allows you to tell a story and explain how a user will interact with your design, without the need to draw a single pixel or code a single line. Storyboards are generally used

during the discovery phase of a project, or during pitching activities when we are trying to dazzle a client with our creative thinking!

- My Submission

Storyboards for Transportation

- 3 Ideas, 2 Storyboards

- **Vehicle Vandal Vision.** This is a mobile application that can be used to find and predict the degree of damage to any vehicle.

Why the Idea? a possible solution for some *problems with ownership* mentioned in interview

1. **Can find damages to the vehicle** through advanced depth-mapped videography. Computer Vision and Image Recognition can pick up new damages apart from old ones at a glance. *Helps a user to justify damage coverage costs with the rental car owner to prevent over-coverage.*
2. **Can predict the type and degree of damage** through Machine Learning and Computer Vision Techniques with an AR experience, *helping you to choose a good rental car in the first place.*

- **Helmet Cam.** This is a 360° camera attached with a helmet that can record atmost 10 minutes of video footage. Has accompanying smartphone and smartwatch applications to help prevent any damage to you or your interests in case of an accident.

Why the Idea? a possible solution for "*the bigger player is always one under scrutiny by law*" problem mentioned in interview

1. **In case of a potential collision**, the *smart watch alerts to notify you before the collision* can happen through Machine Learning and Computer Vision.
2. **In case of a hit and run**, the smartphone *extracts the number plate* from computer vision while *automatically calling the police, medical helplines and sends your location, the video and the plate number to all emergency contacts* in case of low pulse and irresponsiveness a minute after fall detection.

- **Social Transit Network.** This is an application where people can share, plan and form new travel plans with people across the Internet.

Why the Idea? A solution based on the idea of *multimodality* discussed in the interview.

1. **Predicting Traffic.** By anonymously crowdsourcing data on different travel methods on a particular route, using machine learning, arrival times and departure times can be accurately determined for each intermediate mode of transport thus *helping in the planning process*.
2. **Planning and Organising Trips.** By sharing your travel itineraries on the network, you will be matched with people across the internet, thus helping you *minimise the travel cost* by travelling with many.

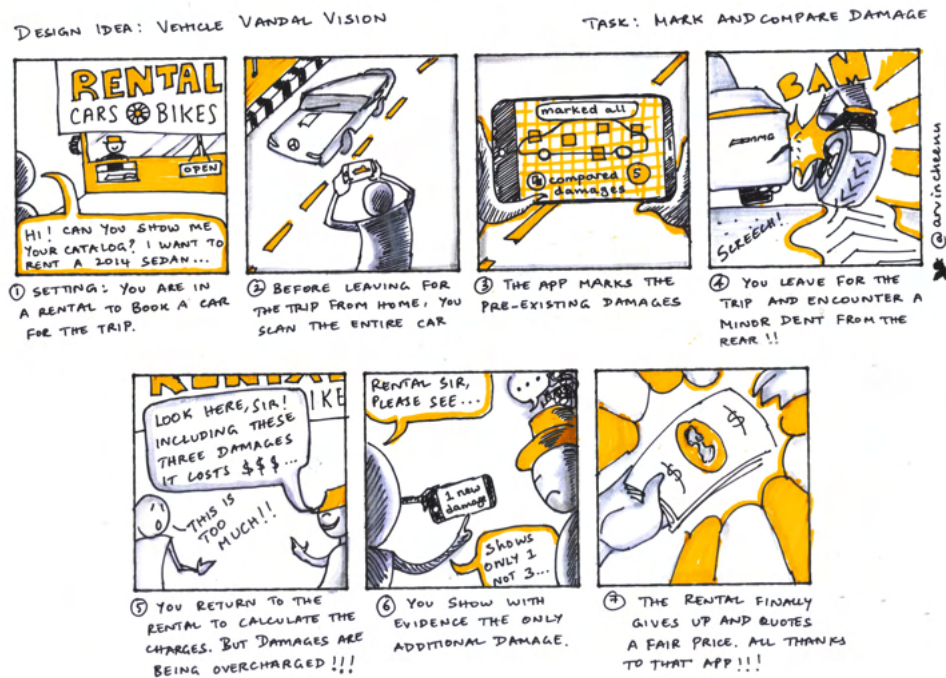
• Storyboard Sketches

- Vehicle Vandal Vision: Damage Prediction



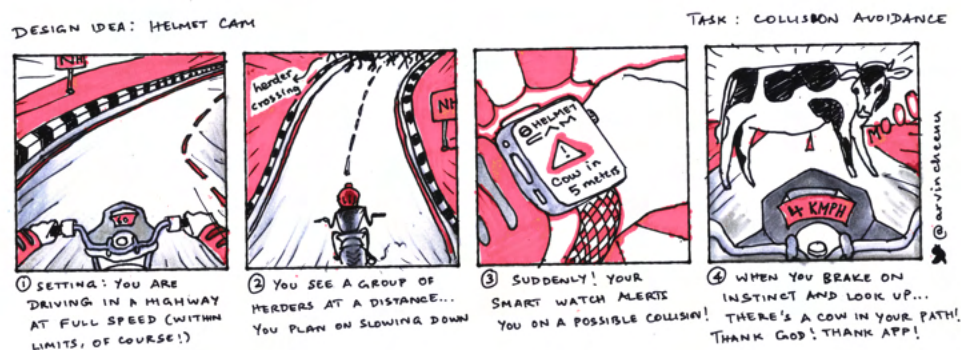
Can predict the degree of damage or degradation to the vehicle by Computer Vision and Image Recognition.

- Vehicle Vandal Vision: Damage Tracking and Recording



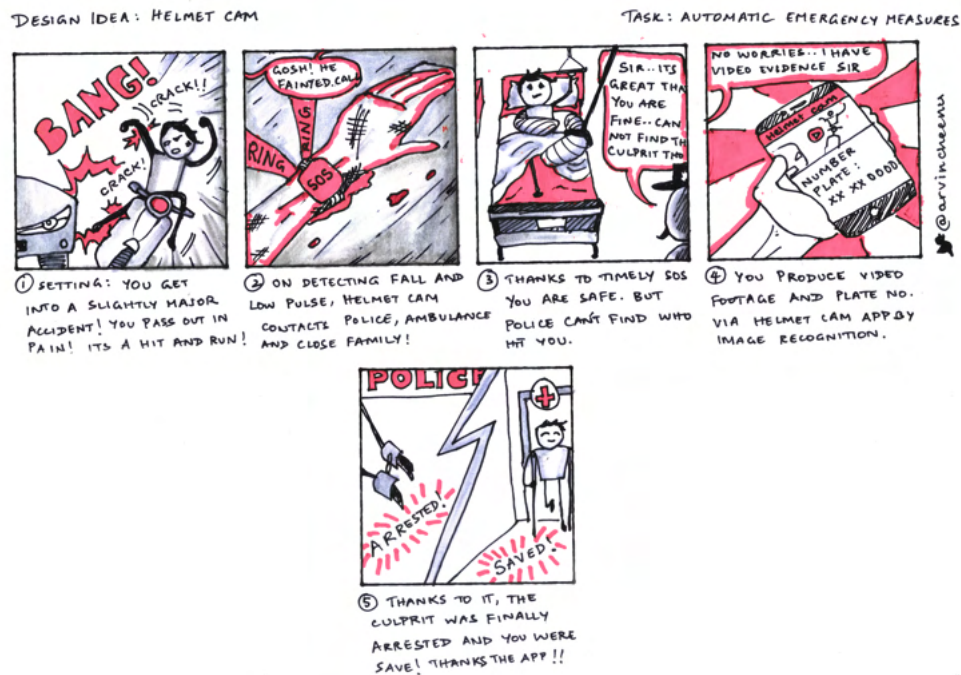
Can track, record and find existing and new damages.

- Helmet Cam: Collision Avoidance



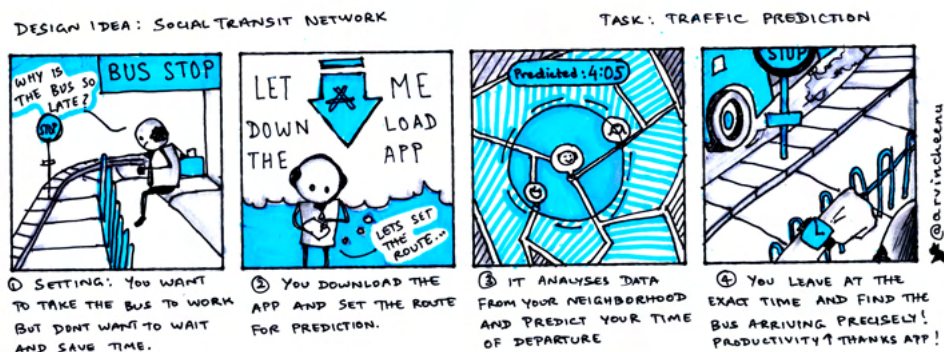
Using Computer Vision in realtime, through your smartwatch, the Helmet Cam can help you avoid collisions.

- Helmet Cam: Number Plate Recognition and Emergency Features



In case of fall detection and pulse reduction, automatically contacts police, ambulance and emergency contacts by sharing the current location and vital status. Automatically recognises number plates through computer vision from recorded footage which is very useful for handling hit-and-run cases.

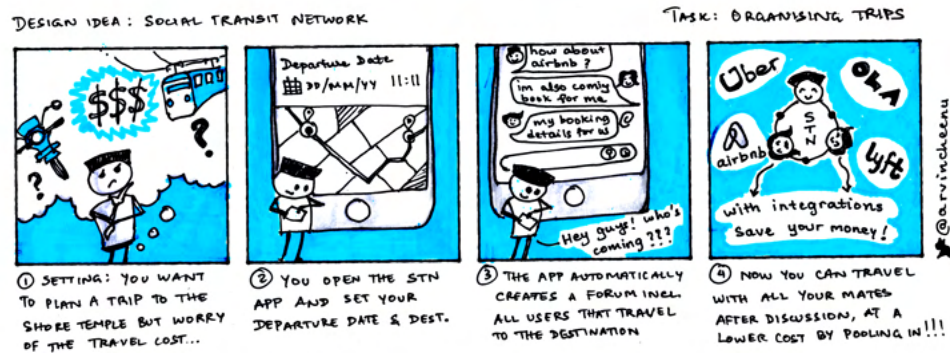
- Social Transit Network: Traffic Prediction



By crowdsourcing Route-specific user data anonymously everyday, can help discover patterns through machine learning to predict traffic on a particular route

with astonishing accuracy.

- Social Transit Network: Organising Trips



Connects people across internet travelling to the same destination as you while providing integrations with popular ride-sharing and rental platforms helping you socialise and build new connections while travelling and having fun at a reduced cost.