

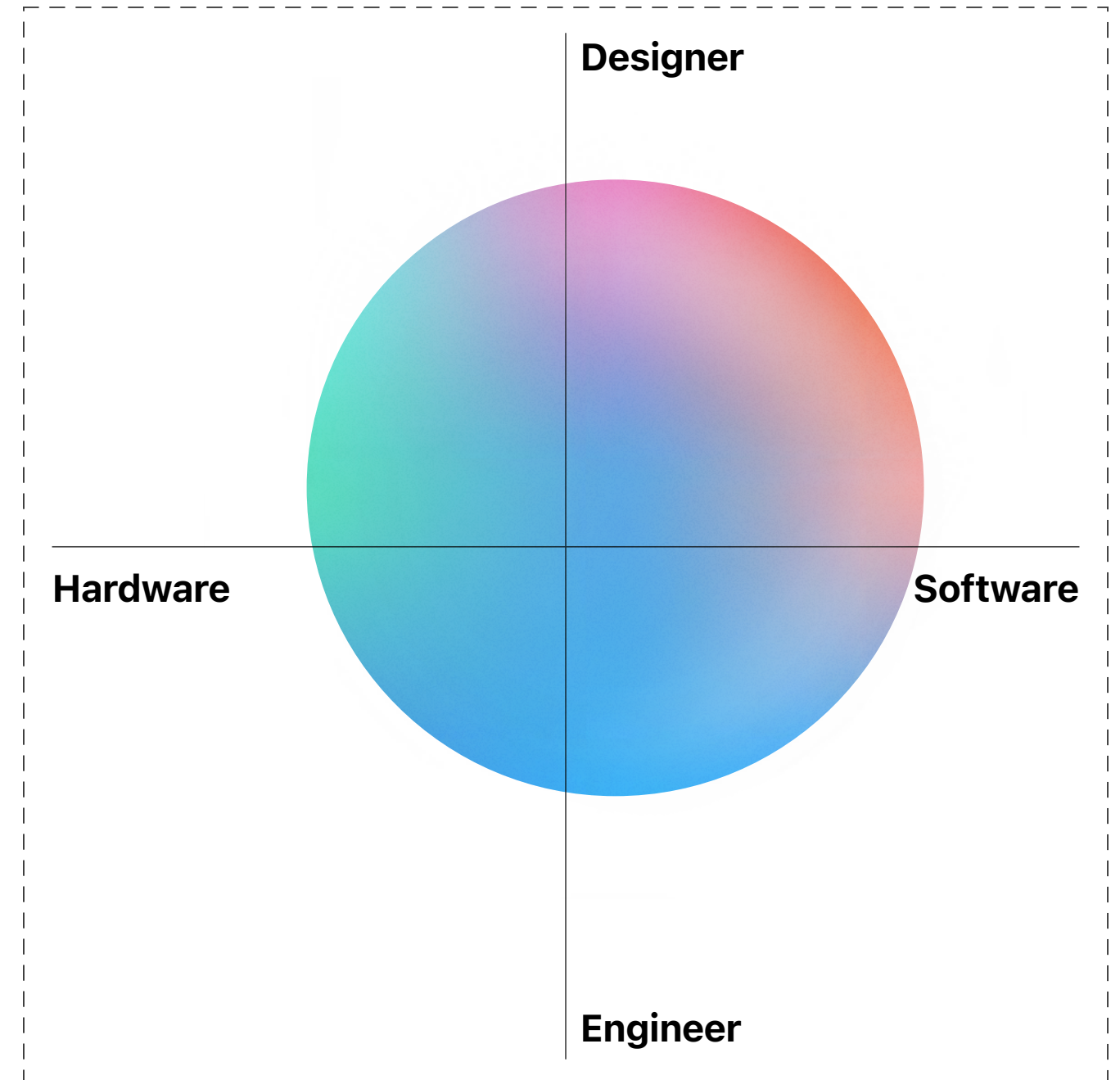
# Vidit Bhargava

## Design Technologist

I design with purpose and passion—bringing my values to technology, art, and social impact to make innovative experiences.

This is a collection of my work through the lens of my values

THE DESIGN TECHNOLOGIST 2X2 • MY SKILLS ARE THE MULTI COLOURED BUBBLE



# My Values

Computers should not be designed to keep people hooked.

Learning should be enjoyable, engaging and accessible for people.

People need to be empowered to act on critical issues.

Technology can encourage healthier habits



# Computers should not be designed to keep people hooked.

## Call to Action

Amongst students, smartphone addiction is a major cause of worry. The devices that empower them to learn are also havens of distraction due to an ecosystem that rewards engagement.

In this thesis, first I propose a design system of action-centric design to create applications that incentivizes efficiency and reliability of accomplishing goals over engagement; then I represent the system through an ecosystem of ambient computers that stay in the background until the student invokes them.

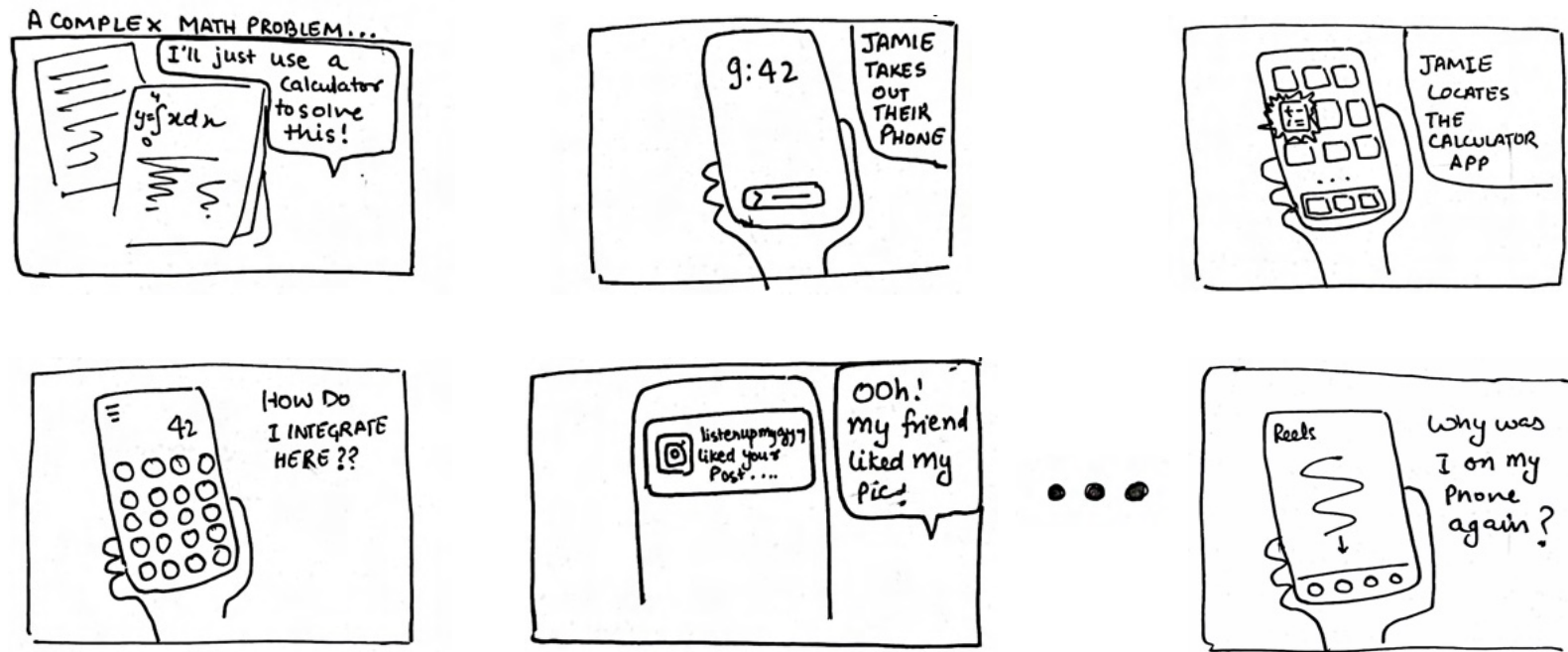
**SKILLS:** SYSTEM DESIGN, PROTOTYPING WITH EMERGING TECHNOLOGIES, HARDWARE INTERACTION DESIGN, UI / UX DESIGN, AI UX DESIGN, AGENTIC FLOW ARCHITECTURE, DEVELOPMENT

**TOOLS USED:** SKETCH, SWIFT, SWIFTUI, ARDUINO NANO, BLE COMMUNICATION, CHATGPT



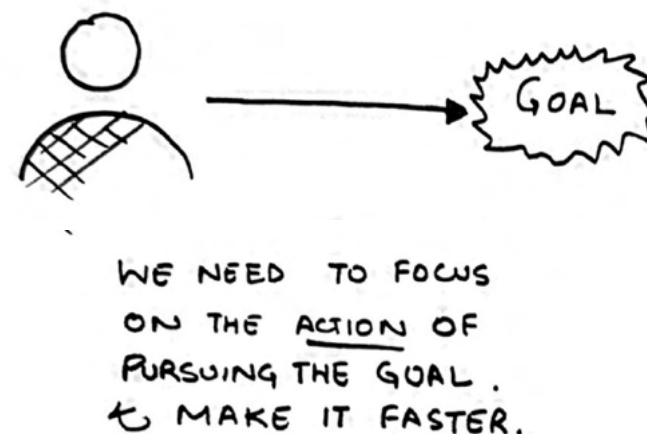
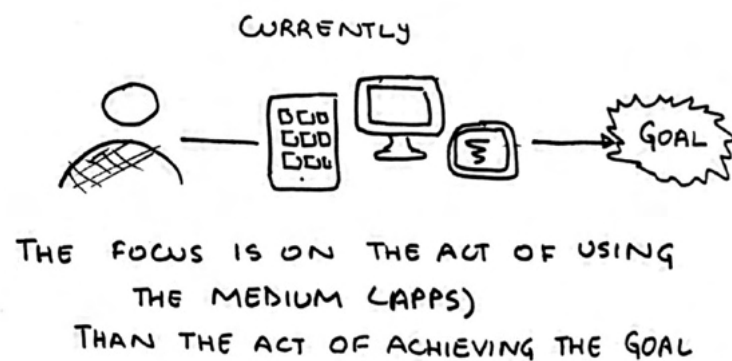


# Motivation



WE USE COMPUTERS TO FULFILL  
OUR WANTS & NEEDS (i.e. GOALS)

COMPUTERS ARE TOOLS THAT HELP  
US ACHIEVE OUR GOALS FASTER.



## Distractions when studying

*Working with complex mathematical  
equations with apps*

This is a day in the life of a typical college student. They pick up their phone for study, and soon a social media notification derails their task by sucking them into an endless abyss of content.

## Computers are tools to help us achieve wants & needs faster.

They are a medium for us to achieve our goals; in the same vein as a bicycle helps us get from one place to another faster.

Clearly, our modern day computers are not great tools by this metric. The software we use is incentivized to have us spend more time on it, than achieving our goals.



# The Call to Action system

An Action Centered Design System that combines a series of ambient displays to make distraction free computers that are present when you need them and stay in the background when you don't!



## Thought Lamp

The ambient lamp is designed to be the central hub of the ambient computing system, as a student's desk lamp it acts as a normal lamp; until the student decides to interact with it as a computer.



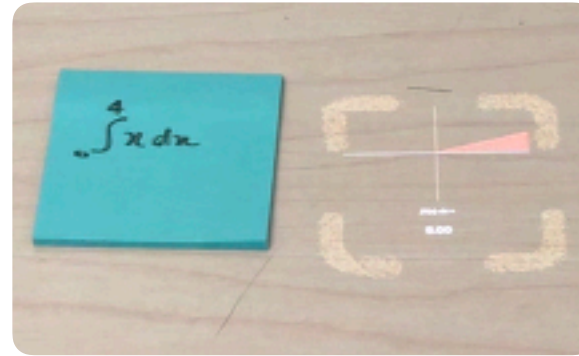
Jamie has a math problem, but wants to stay off their smartphone.



Jamie puts the the math problem under the thought lamp and pinches to have the computer perform an action.



The lamp infers what's written on the sticky note and picks a suitable action to perform the requested task.



The lamp projects the result to the maths problem along with a graph to further the student's understanding.



## Ambient Plant

The ambient plant is an extension that can be placed under any plant to have the leaves move when it blows wind. It turns the plant into an ambient display for information.



## Olfactory Reminder

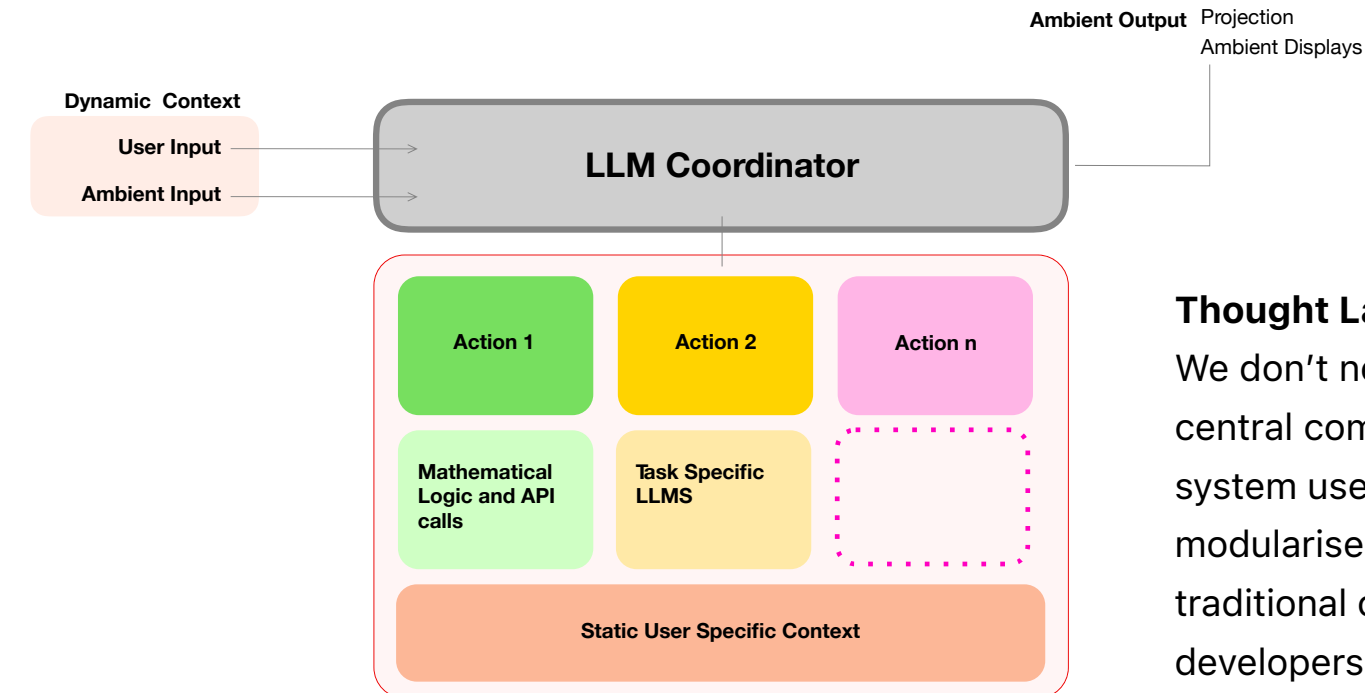
The olfactory reminder is a way of reminding people of different things through smells. It's an abstract ambient display that can be configured based on student's needs



# How does it work?

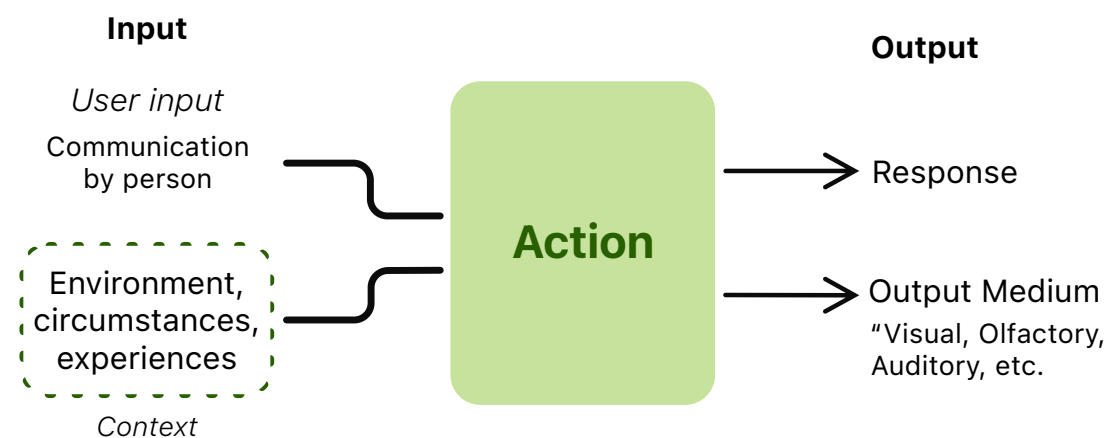
Under the hood, the action centric system is built on a novel architecture. That mindfully uses LLMs to coordinate and pick different actions. The action is then executed by the computer.

*For example, complex mathematical problems can be solved through traditional computing, in a more reliable and faster way than LLMs. The ambient lamp doesn't use an LLM to answer the mathematical problems. It delegates the task to a dedicated action that would solve that.*



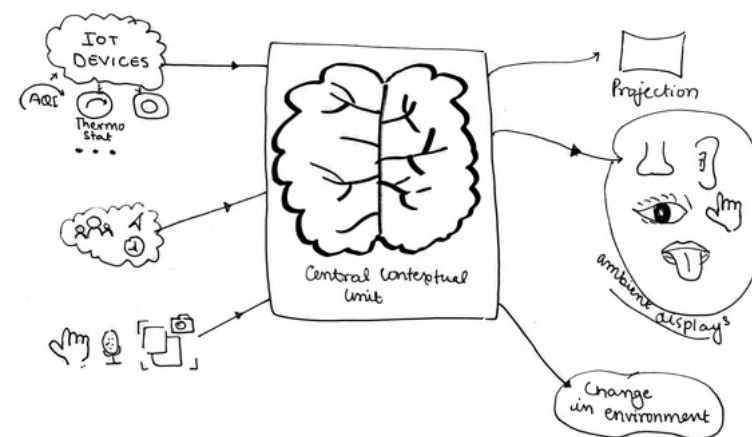
## Thought Lamp's Novel Agentic Flow

We don't need to use LLMs for everything. So the central computing unit in the ambient computing system uses a novel agentic flow, one that modularises actions to leverage both AI and traditional computing paradigms. Plus it provides developers the ability to make actions for the system.



## What is an action?

An action constitutes of a perform logic that performs the task it's designed to do. It takes essential user input, but also considers the user-context, when performing the action. The output constitutes of the response and the medium it's conveyed in.



So if the output for weather conditions is rustling of leaves, the ambient plant is notified about it to display the information.

*The lamp acts as a central contextual hub for the action centric system. Taking in the context from the IoT devices in the room and relaying it to the different connected ambient displays.*



# Learning should be enjoyable, engaging and accessible for people.

## LookUp: English Dictionary

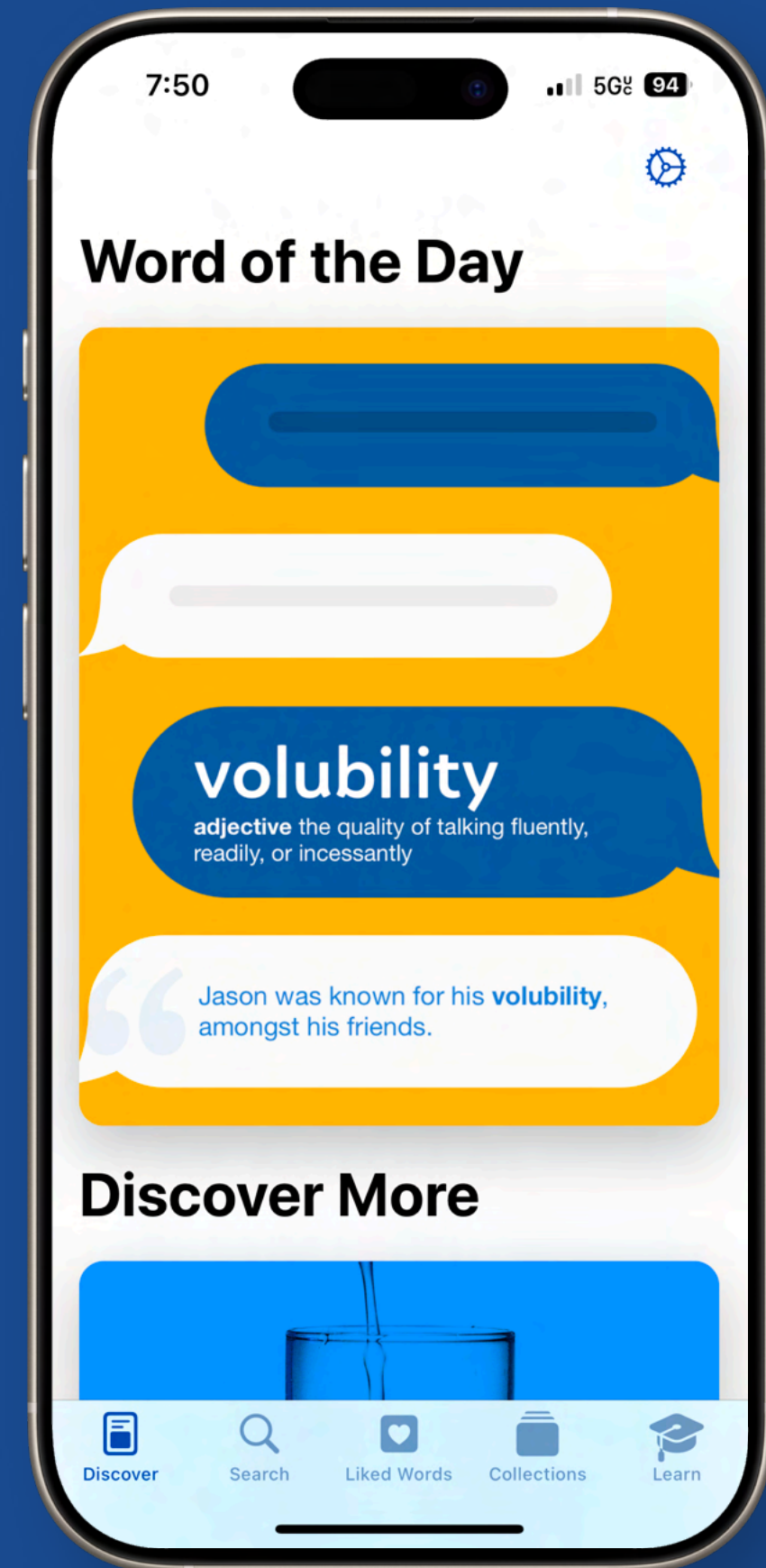
LookUp brings fun and interactive ways of learning words to a traditional dictionary. Word of the Day illustrations, and interactive quizzes make it a useful app for students and non-native English learners.

LookUp is an award winning app that enables english learners to build their vocabulary through beautiful illustrations and interactive quizzes.

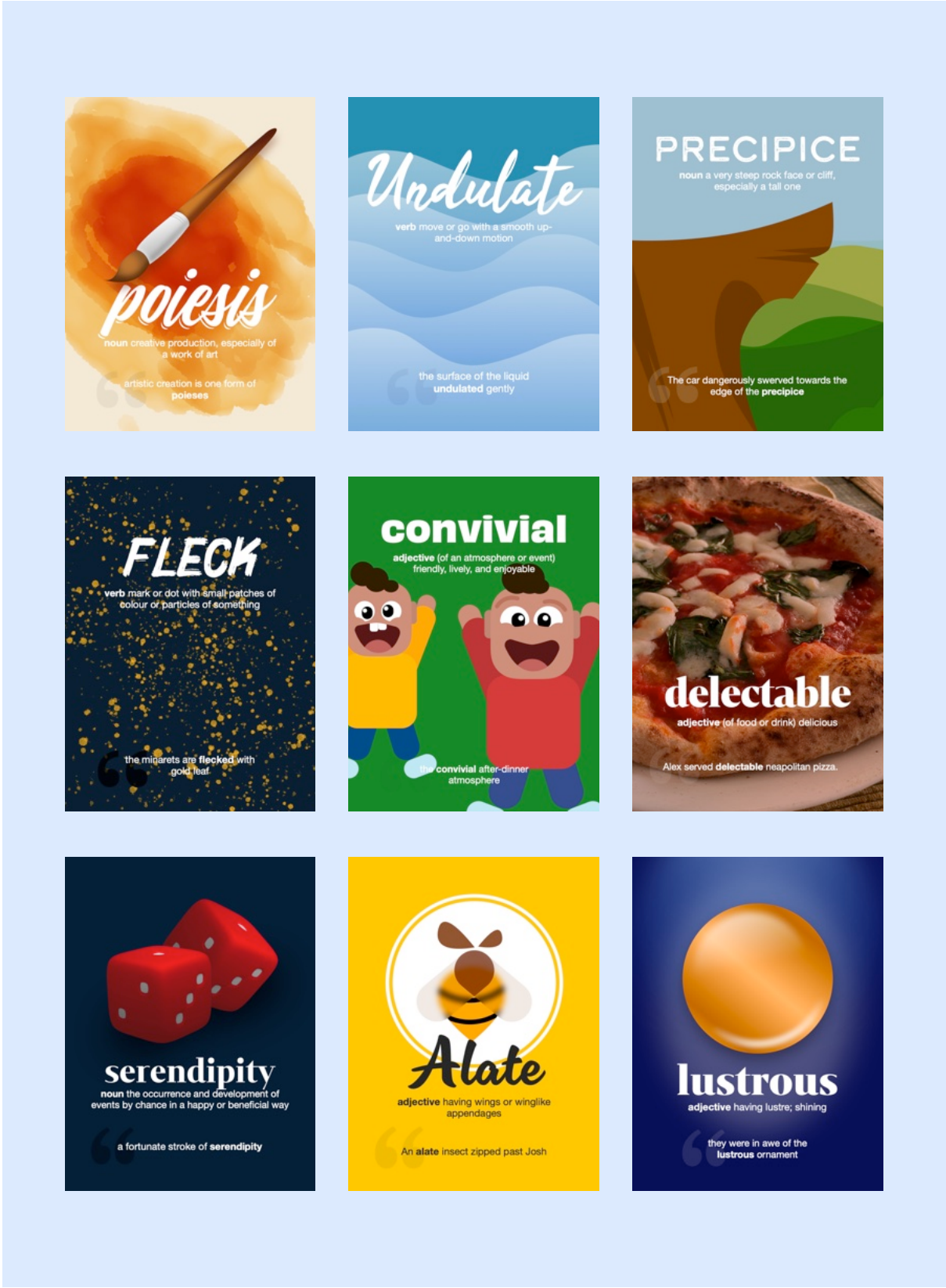
**RESPONSIBILITIES:** HANDLE THE DESIGN AND DEVELOPMENT OF LOOKUP: ENGLISH DICTIONARY

**SKILLS:** WIREFRAMING, PROTOTYPING, PRODUCT DESIGN, VISUAL DESIGN, INTERACTION DESIGN, APP DEVELOPMENT

**TOOLS USED:** SKETCH, PHOTOSHOP, SWIFT, SWIFTUI



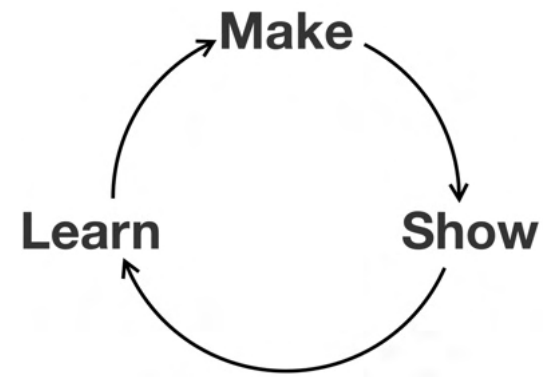




LookUp's design adapts to the platform it is running on.

Central to LookUp are its carefully illustrated words of the day





# Design Process

LookUp follows an iterative design process of building features, showing it to stakeholders and learning from their feedback.

Everything begins with a prototype in LookUp, whether it's lo-fi sketches or hi-fidelity code ready interactions.

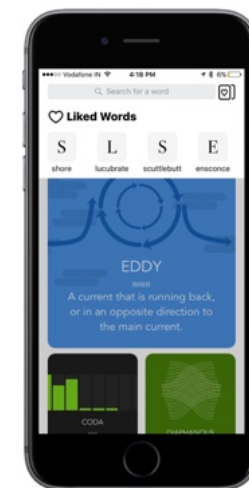
## Make

The process of making LookUp involves three steps. Sketching → UI Mockups → Programming



## Show

Each feature goes through a beta phase where its initially shown to a few people to get their feedback.



"You can see it just gives 4 or 5 words, but if I want to check older ones I can't"

"My liked word list is already too long and difficult to manage"

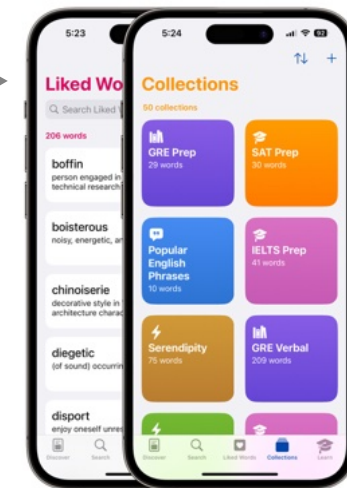
"I want to be able to learn with flash cards..."

"I like using these definitions as flash cards to help myself learn new words."

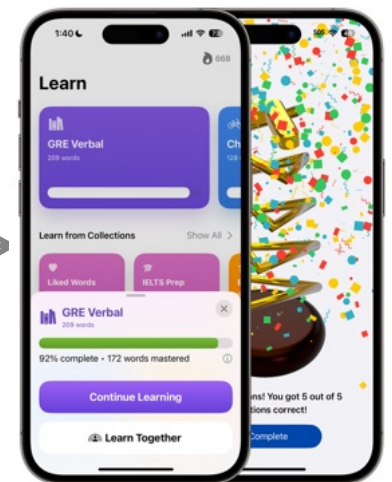
"I want to export my collection and be able to import it into Anki which is a 'spaced repetition' app."

## Learn

The feedback from beta testers, and eventually the public is taken in and acted upon.



**Collections** help people organize words in different lists.



**LookUp Learn** enables people to learn the words they collect through interactive quizzes, using spaced repetition

Sometimes there's a direct link to people requesting something and the ideal feature, on other occasions feedback provides an opportunity to design something new



## Iterative Design

Evolution of LookUp's design over 10 years



People need to be  
empowered to  
act on critical issues.

# AGENT JOHNNY



Agent Johnny is an AI powered interactive short film, where the viewer is one of the characters of the film. The goal is to create an immersive interactive experience where real time dialog can change the course of a plot.

The interactive film blends a crime-thriller genre with wicked problems such as the water crisis and offers viewers agency by making them a pivotal part of the film.

**SKILLS:** FILM-MAKING, STORYTELLING, AI UX  
DESIGN USING CHATGPT AND WHISPER

**TOOLS USED:** SWIFT, SWIFTUI, CHATGPT,  
WHISPER, FINAL CUT PRO





### Agent Johnny on the Vision Pro

The interactive nature of Agent Johnny lends itself to perfectly to a medium like the Vision Pro where the viewer can interact with content more immersively.



### Agent Johnny Premiere at The Jacobs Design Showcase, UC Berkeley

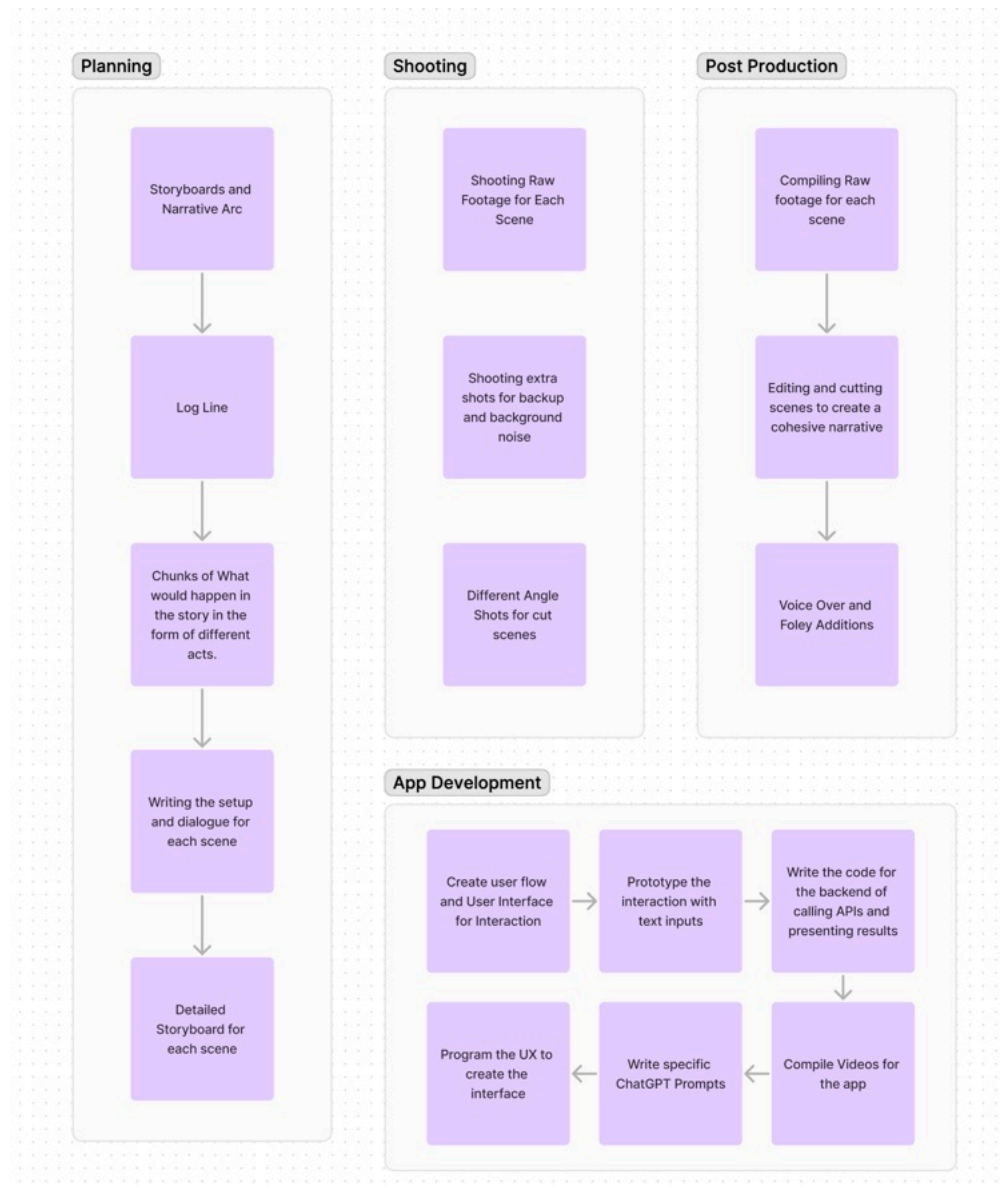
An interactive exhibition was setup to showcase Agent Johnny. Their responses and feedback was taken into account to make further edit's to the film's experience.

The goal for agent johnny is to create a sense of agency amongst the viewers. Their actions define what happens to the characters in the film, a subtle yet powerful way of educating viewers about a wicked problem.

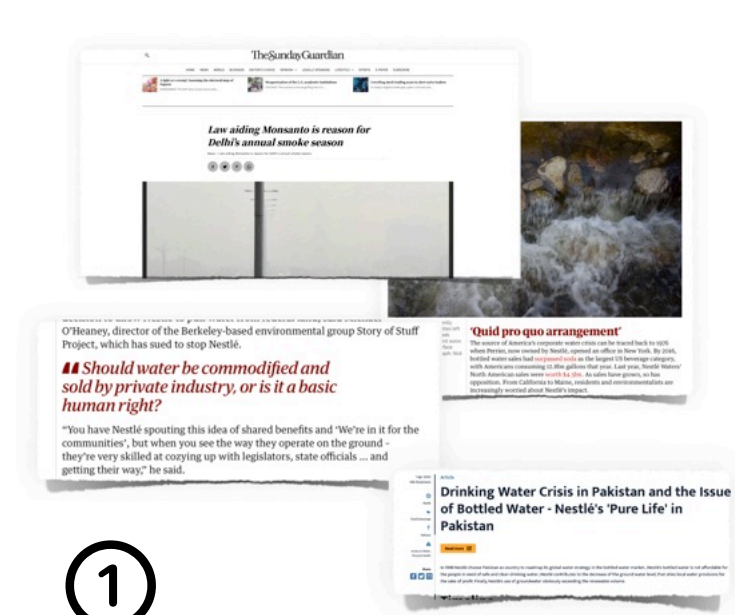
The film uses emerging technologies such as AI voice interfaces, and LLMs to envision a novel form of media, one where the viewer is not just passively consuming content but also interacting with it and learning along.



# How I made it?



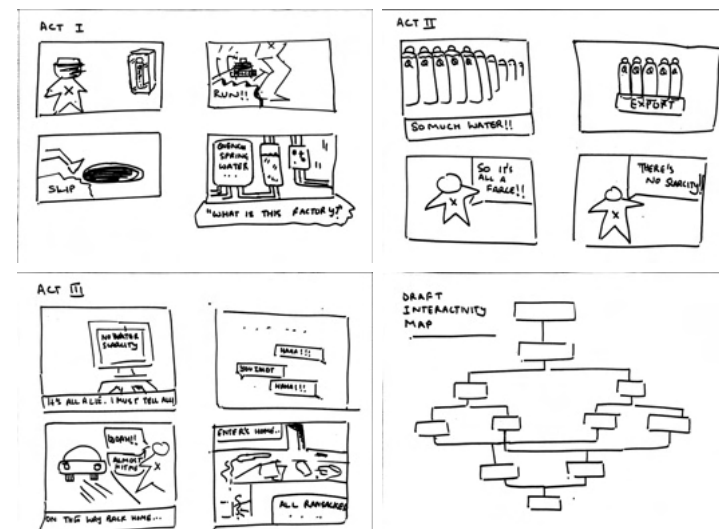
Agent Johnny Development plan



①

## Research

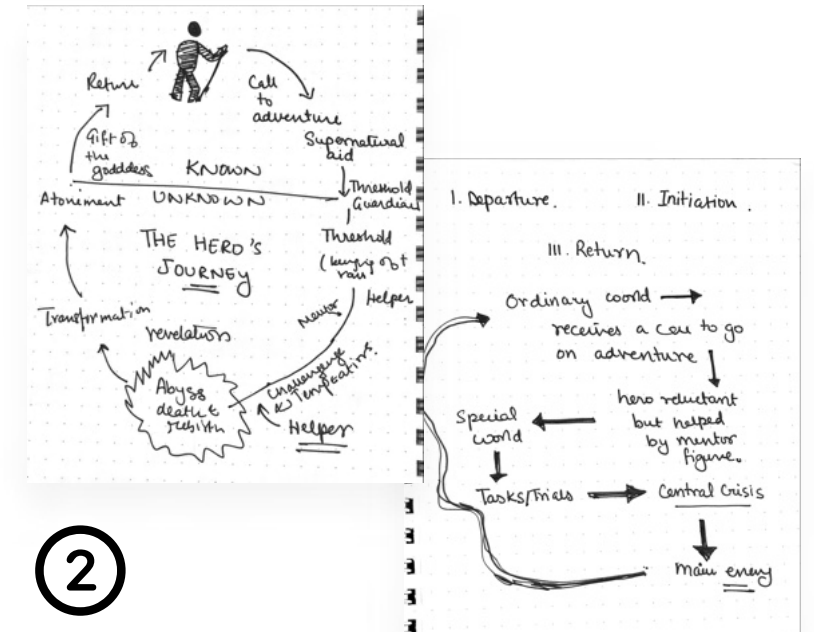
The problem of manufactured water-crisis was studied in depth.



③

## Storyboarding

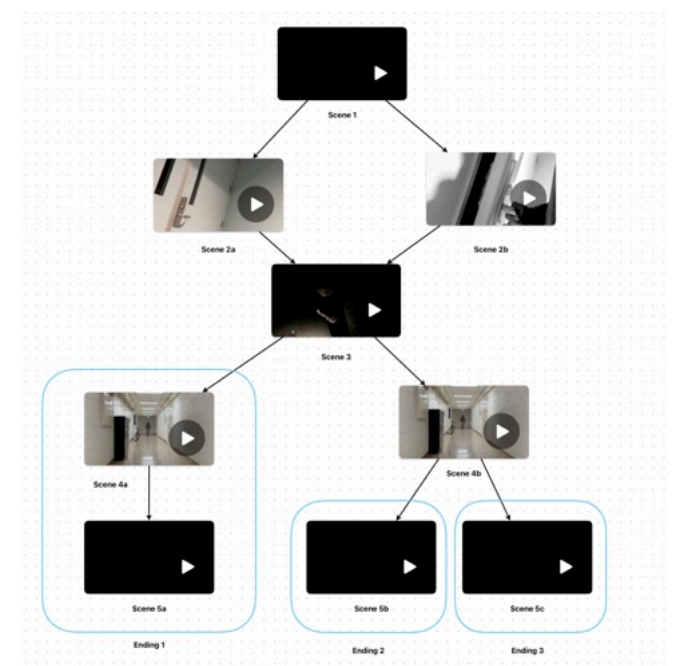
A rough outline of the plot, and detailed storyboards for each scene were made.



②

## Hero's Journey

The hero's journey narrative arc was used to write a rough outline for the film's plot



④

## Screenplay and Interactivity Map

A detailed screenplay and interactivity map were created.





*Script Reading*



*Costume Try-ons*



*Filming Setup: An iPhone on a camera-mount*



*Voice Over and Audio Dubbing*

## ⑤ Shooting & Editing

The film was shot on an iPhone & edited on Final Cut Pro



# Technology can encourage healthier habits

The walk,man!! is an old walkman repurposed with an Arduino and an accelerometer to work only when the person walks

SKILLS: MICROCONTROLLER (ARDUINO NANO),  
SENSORS, HARDWARE INTERACTION DESIGN



## WALK,MAN!!

Designed as a commentary on our sedentary lifestyle, Walk,man!! reimagines the classic music player as a fitness companion, by making it work only if the person using it is walking.

This fictional fitness companion is designed to address the dichotomy presented by the advancement of portable technology, where starting in the 1980s, tech started to become portable but our lifestyles became more sedantary.





**The walk,man!! in use.** The person just needs to press play, and start walking; when they walk, the music starts playing.

**80s style TV Ad:** For the final act i.e. the presentation of the walk,man!! I decided to shoot an ad for the device. But as an 80s style commercial, shot and presented on a VHS tape inserted in a CRT TV.

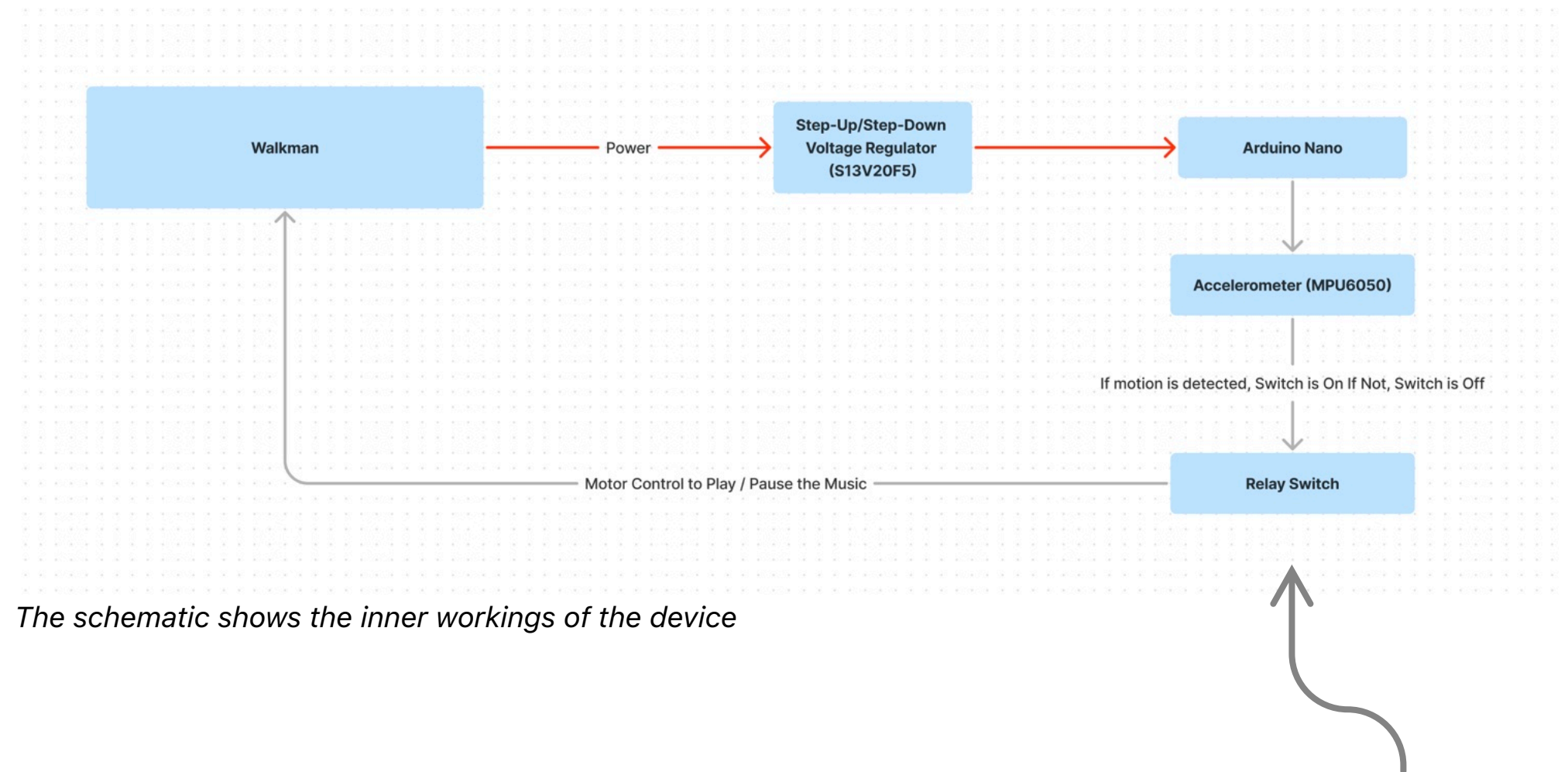




# How does it work?

Walkman's DC Motor is interfaced with a relay switch that allows the current to flow to the motor when the accelerometer detects motion.

The accelerometer detects walking motion and then communicates to the relay switch and turns the walkman motor on / off.



*The schematic shows the inner workings of the device*



# Impact of my work

Designing quality experiences that help people.



500,000+

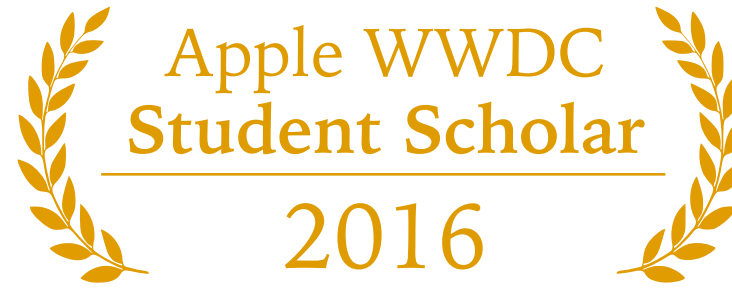
people served through my apps

\$250,000+

revenue generated through my work



## Awarded several times for my excellence in design



My work has been featured in major publications







This is me demoing LookUp to Tim Cook, CEO of Apple Inc.

## Vidit Bhargava

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