

CSCE 483

Caleb Herrera

Spring 2023

# Meeting 1:

1/27/23 2:15 - 3:40

Goal: Make final decision on which project to do

## Project Ideas:

- Plant Health Device
- Anti-Human Trafficking Device
- Cooking Device
- Beer Brewing Device

### Anti-Human Trafficking Device:

- Most likely too simple

### Plant Health Device:

- Interesting
- Many devices on market already

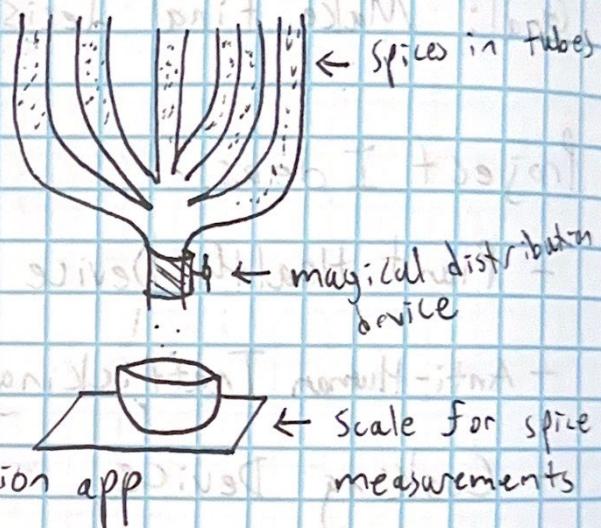
2:

1/27/2023

## Cooking Device:

- "Spice Rack" for automatically distributing spices

Rough Sketch:



## — Utilizes:

- Servos
- Scale
- Arduino/Raspberry Pi
- Potential for companion app

## Beer Brewing Device:

- Similar to Spice Rack, but applied to distributing minerals for brewing

End of meeting

LectwC/Lab 1/30/23  
8:00AM - 10:30AM

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Key Points for Pitch:

- Design an automated "spice rack"
- Utilizes servos, motor controller, raspberry pi (most likely)
- Connects to companion app / web app
- Can scale up to beer brewing application
- Target audience (perhaps people with motor function impairment)
- Would require us to design/build the Spice array ourselves
  - Probably using wood/3D printed plastic, and hardware store tubing

Still need to:

- Research relative need
- Research past solutions
- Make general budget

1/30/23

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Solo Work 2/3/23 5

### Session Goal:

Prepare for weekly team meeting by ~~researching~~ researching necessary items for our proposal document.

### Specific Document Sections:

- Introduction
  - Needs Statement
  - Goal and Objectives
  - Design Constraints + Feasibility
- Literature + Technical Survey

### Pest Solution Research Notes:

- Very similar design found as a commercial product: "TasteTro"
- Many Previous "Senior Design" projects found online that are similar to our idea
  - Prompts the question: "What will make ours different?"

6:

2/3/23

55°F 55%

178W 30°S

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# Team Meeting

2/3/2023

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3:00 PM - 4:31 PM

Discussion on "TasteTro" product:

- Recipes on machine are pre-defined
- 

"MeasureMINT"

- Doesn't incorporate recipes
- No networking component

Aiming to finish Introduction by  
Monday, Feb 6

Also, literature + technical Survey

Intro - Feb, 6<sup>th</sup>

Lit + Tech Review - Feb, 8<sup>th</sup>

Proposed Work - Feb, 13<sup>th</sup>

Eng Standards + Exec Summary - Feb, 15<sup>th</sup>

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2/3/23

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08:07 - 10:10 +

07:07 + yourself to intent + motivation!

Lecture 2/6/23

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8:00AM - 10:45AM

5 Dysfunctions of a team Quiz - today

- Lack of Trust
- Fear of Conflict
- Lack of Commitment
- Avoidance of Accountability
- Inattention to Results

Requirements Specification Ideas:

- System must fit in  $1.5^{\text{in}} \times 1.5^{\text{in}} \times 1.5^{\text{in}}$  cube
- System must support a minimum of 4 spices
- System must be able to dispense Spices at a minimum volume of 1 teaspoon
- System should have some level of water resistance
-

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## Team Meeting

2/6/23

8:05 PM - 9:25 PM

Met to finish/review proposal introduction draft

# Lecture 2/8/23

8:00AM - 10:00AM

After completing our introduction,

Our next goal is to complete  
the literature and technical survey

- Expand Requirements statement
- Quantify more
- Potentially cite study for needs statement
- Clearing
- Always good to mention future possibilities
-  ← spice width style distributor

I'm focusing on Fasttron's tech Survey

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2/8/23

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MA0010 - MA0018

Collaborative work environment with

statements at a local synagogue

Yarmulke (head covering) is a sh

synagogue (theocracy) - Bronx

group - Bronx)

complete when not white and unchristian

animosity

- religious practice of each community

- individuals of all religions > ~~GOD~~

prayer does not affect no place

# Team Meeting

2/10/23

13

2:30 PM - 4:05 PM French meeting no 21/10/23

Progress:

Focussing On:

- Revising Intro
- Starting presentation slides
- Completing literature + technical survey

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Solo Work

2/12/23

Working on proposal document + presentation

Tasks:

- Finalize intro / tech survey revisions
- Begin/Complete 1<sup>st</sup> draft of:
  - Proposed Work Sections
  - Engineering Standards
- Prepare presentation

Work Done:

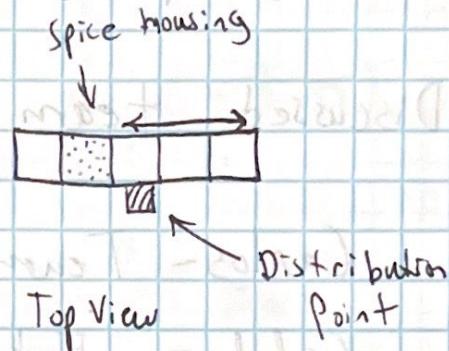
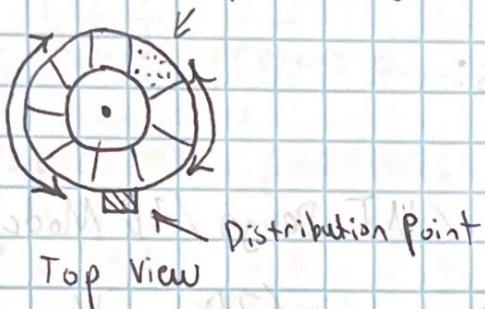
- Started project planning documents
- Brainstormed available roles
- Researched some available materials
- Created documents for PERT/gantt charts or burn down charts

2/12/23

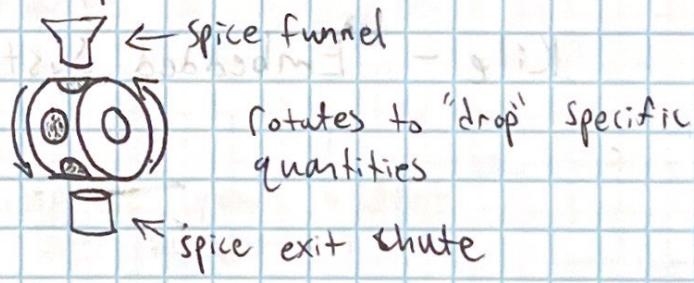
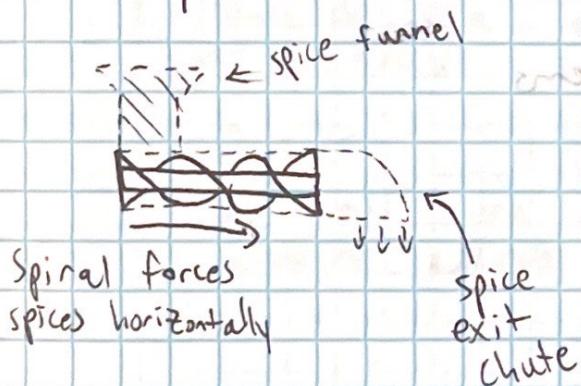
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## Alternative Solutions:

- Rotating vs. linear Spice organization system  
Spice Flowing



- Spiral or cup distribution system



- Support recipes, individual spices, or both in UI

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Lecture

2/13/23

8:00AM - 10:30 AM

Catching up on individual work we've done.

Discussed team roles:

Carlos - Team Lead / UI Design / 3D Modeling

Caleb - Embedded Systems / 3D modeling / Hardware

JP - UI / Software

Lile - Embedded Systems

Lecture 2/15/23

## Presentation Day!!!

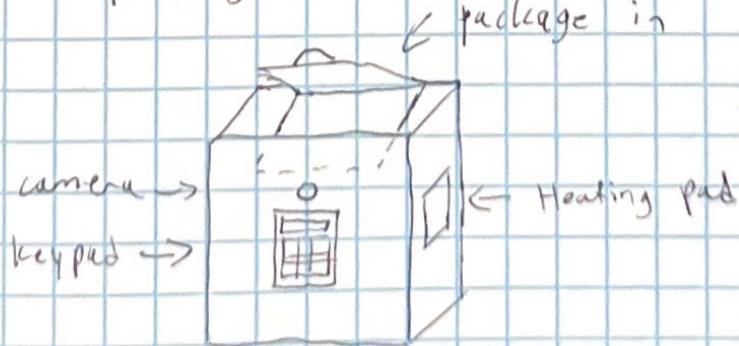
Our team presented first (8:15 - 8:45)

Important questions asked:

- How will you calibrate it? How will accuracy be tested?
- How do you change 'spices'? Will it be easy?
- How will you improve your budget? (we're already over budget...)

Next, Team A

Anti package theft device



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Next, team "The biggest losers" 2/15/23

Competitive fitness tracking device

Like fitbit/apple watch but far more affordable

Next, team "Savvy tracking"

Music Master, a musician's practice buddy

an application that promotes quality practice time  
for musicians with analytical feedback

Very nice team organization using Agile, Jira

Next team, "Super Salad"

Customizable Food dispenser