

CAPSTONE

# DR. NISHA PRADHAN

Presented by: Antonia, Ayushi, Emily, Misha  
7.5.24



# TEAM INTRODUCTION

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**Emily Dai:** Hi everybody this is Emily Dai. I am from LA and I am a rising junior.

**Antonia Schwartz:** I am a fourth-year Integrative Human Biology major with a minor in German at UC Berkeley

**Ayushi Bhardwaj:** My name is Ayushi Bhardwaj and I'm a rising senior at Bella Vista High School in Sacramento

**Misha Ganguly:** Hey! I am a rising junior at Lynbrook High School.



DR. NISHA PRADHAN

# EPATIENT INTRO



Dr.Nisha Pradhan graduated from the University of Colorado School of Medicine in 2020. She is currently in her 2nd year of residency in North Carolina. She is a diagnostic radiology resident. Most importantly, she has been an anosmia patient for more than 10 years.

Definition: Anosmia is the complete loss of the sense of smell, which can significantly impact a patient's quality of life.

# INTERVIEW TAKEAWAYS





## SAFTEY

- struggle to detect spoiled food,
- can not smell gas leaks



# SOCIAL

- can't gain memories relating to smell
- other connections with smell



# COOKING

- unable to taste flavors
- leading to loss of appetite
- weakened relationship with food



## EMOTIONAL

- feelings of anxiety due to food
- good and bad days
- no cure just symptom relief



HOW MIGHT WE USE  
SCIENCE AND OTHER  
TOOLS TO ALLEVIATE  
SYMPTOMS?

# DIGITAL SOLUTION: APP



- **Personalized Cooking Recipes:** Provides patients with customized recipes that cater to their specific anosmia-related challenges, ensuring safe and enjoyable cooking experiences.
- **Anosmia-Friendly Remedies:** Offers practical solutions and remedies to help patients navigate good and bad days, promoting better quality of life and independence.
- **Social Integration Features:** Incorporates social features to connect patients, fostering a supportive community and reducing feelings of isolation.

# PHYSICAL SOLUTION 1: BOOKLET OF TIPS



- **Gas Leak Detection:** Enables patients to identify potentially dangerous gas leaks, ensuring their safety and well-being.
- **pH Test Strips:** Food Monitoring: to test for spoiled food

# PHYSICAL SOLUTION 2: ESSENTIAL OIL DIFFUSER



1. Help recall anosmia patients' memories that are links to smell.
2. Regain ability to smell gradually.

# EXPERIENCE SOLUTION: COMMUNAL COOKING



- Anosmia-Experienced Chef:
  - personalized guidance and support
  - improved cooking experiences
- Communal Cooking Classes and Workshops:
  - encourages social interactions
  - fosters a supportive community.

# DR.NISHA'S FEEDBACK



## POSITIVE

- Essential Oil Diffuser for Memory Recall:
  - Liked the idea.
  - It could help recall the memory of smells as well.
  - Time and Money Saving
- Cooking Classes and Workshops:
  - Appreciated the idea.
  - Found the concept valuable.

## CONSTRUCTIVE

- App for Anosmia Patients:
  - already similar products available.
  - Not particularly helpful.
- Gas Detectors:
  - Less effective.
  - Similar products that do not work well.

# HOW WE CAME TO OUR FINAL DECISION?

# Which idea did the patient like the best?

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1. Essential Oil Diffuser
2. Cooking Experience

# **Which idea did we find feasible to expand on?**

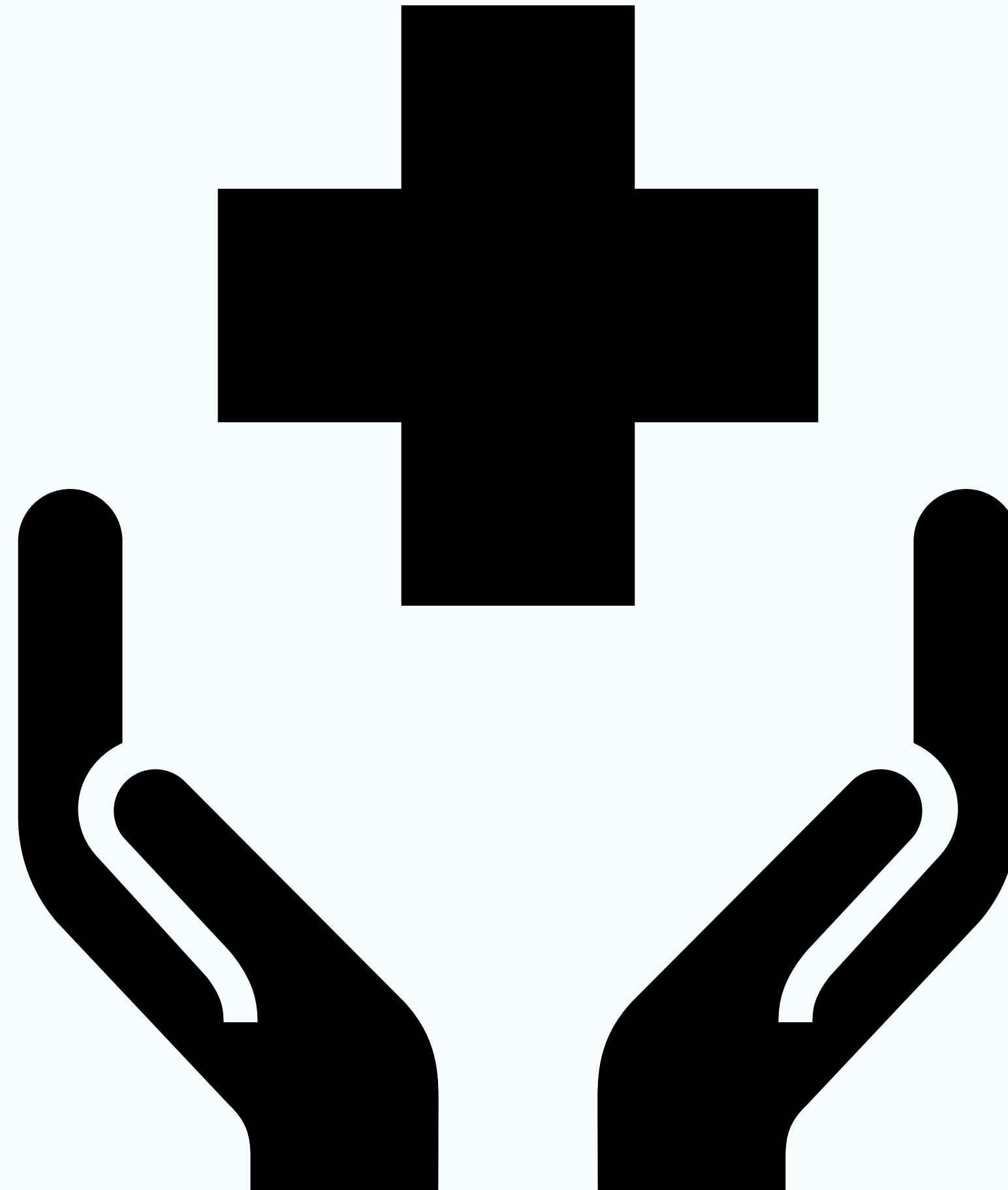
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**1. Essential Oil Diffuser**



## LED ANOSMIA LIGHT DIFFUSER (SKETCH)

- Changes colors
- Releases scents to recall memories
- Can be placed anywhere inside the home.
  - Is convenient and easy to use
- Two buttons at the bottom.
  - One to turn on/off
  - Other to change the scent.
- The scent coordinates with the smell & memory and changes colors based on that



**THANK YOU**