

CS342/MED253 Building for Digital Health

DermTeam

Welcome!

<https://cs342.stanford.edu>



cardinalkit.slack.com

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About Us



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Project Background

- Hormonal Acne affects 25% of adult women
- No miracle medication:
 - Hormonal treatment (e.g. birth control) might not be an option
 - Need to slowly find the right skincare routine (requires several iterations): personalized solutions
- Regular dermatologist consultations are expensive
- Can we build an app that automates this process? Are there patterns?



Need Statement

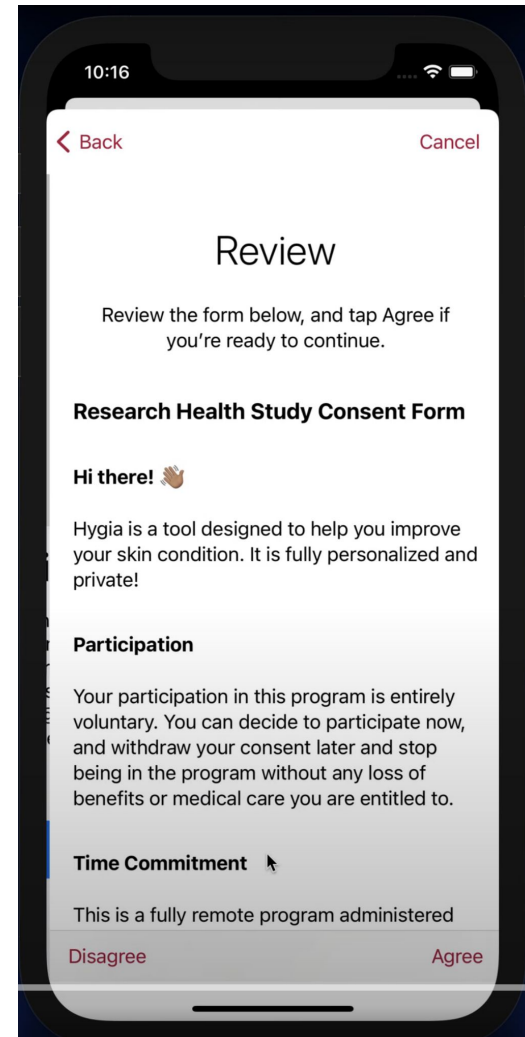
A better way to track and identify risk factors in **adult women** suffering from **acne** in order to provide personalized skincare routines to **reduce the number of monthly skin flare-ups**.

- **PROBLEM:** Acne
- **POPULATION:** Adult women suffering from acne
- **OUTCOME:** Reduce the number of monthly skin flare-ups



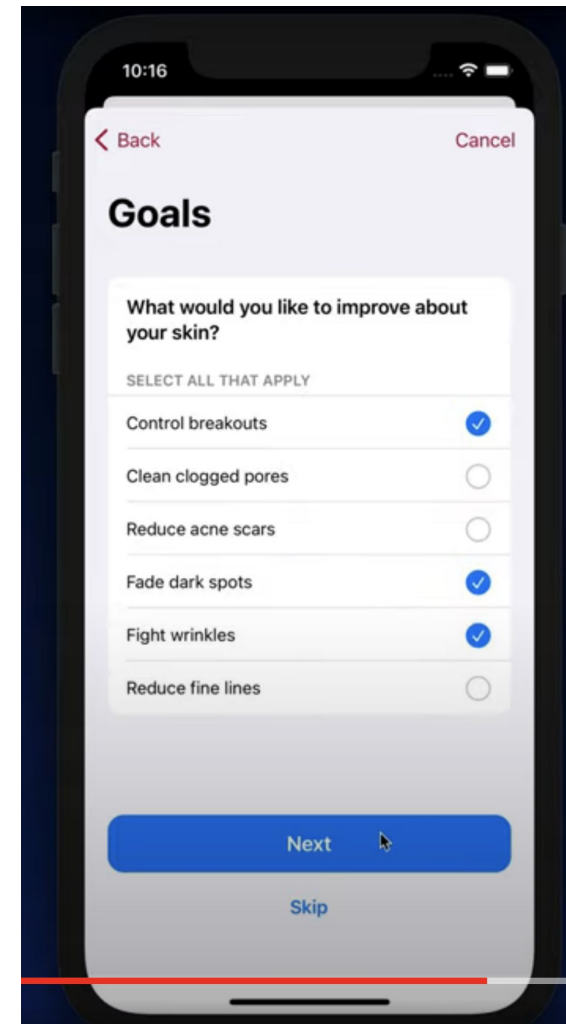
Informed Consent

- Data Collection: Surveys and Selfies
- Privacy:
 - Data Storage: on device
 - Data Processing: on device with CoreML



Surveys (patient-reported outcomes)

- Onboarding survey
 - Goals, previous treatments, medical history
- Bi-weekly survey
 - Improvements, side effects, personal preferences (e.g. smell)
- What worked well?
 - OKR-Catalog: great resource
- What are some *even better ifs*?
 - More fine-grained surveys: help of a dermatologist



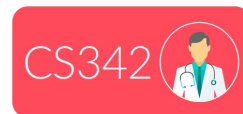
Feedback from Testers

- Tester 1:
 - Survey color scheme should be consistent
- Tester 2:
 - Too many consent steps (all in one page)
 - Color scheme should be consistent
 - More instructions on how to use the app after onboarding survey



Next Steps

- Computer Vision Algorithm (data collection, model training)
- Migrate to purely on device platform with CoreML (your photos are staying on your device!)
- Build skincare routines with the help of a dermatologist and implement recommendation algorithm
- Improve app design (logo, thumbnails)



LIVE DEMO



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