MICHIGAN STATE UNIVERSITY Beta Presentation SmartCook: Smart App For Induction Cooktop Cooking The Capstone Experience

Team Whirlpool

Daniel Nguyen

Ashu Acharya Ziming Qiu Alexis Tochiki Preston Harrell Clarence Nanamori

Department of Computer Science and Engineering Michigan State University

Spring 2023



From Students... ...to Professionals

Project Overview

- Automatically detect what pan is being used for cooking
- Detect when ingredient has been added to pan using sensors and temperature
- Dynamically adjust recipe for user, improving auto progression
- Seamless and intuitive integration with app to make cooking easier for user
- Web scraper and database for easy recipe access

System Architecture



Manual Control







Pan Recognition

8:27 0 G 14 0	1.80	0.4.1
	Chicken and Brocco STEPS	li \$
Select Cook	ware	
Is this your pan? Kitchen Aid stair Yes		
2 Cut Chicken	ίΣ.	
3 Marinate		
Cut broccoli	ě.	
Preheat Coc	oktop	
4	Next step	
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	-	

Timers and Preheating

633 @ G H Ø +0 ♥ 0	6.34 G G ⊠ Ø • O ♥ D
Chicken and Broccoli … 🌵	Chicken and Broccoli … 🌵
Cut broccoli	Cut broccoli
Preheat Cooktop	Preheat Cooktop
	6 Add olive oil
	-5 °F 350 °F +5 °F
	Time left: 0:23
Preheating to 350°F 223°F 54%	-30 sec +30 sec
Add olive oil	Add broccoli
Add broccoli	-
	••••••
Skip step	4 Next step
	× 🕳



Recipe Auto Progression

6.35 G G	1H 0 -	an and Bro	01	× ۵ ۵
	id you add Progressing	an ingred	lient?	
CANCEL	s			
Add the c	ut broccoli int	to the pan		
Stir fr	У	• • •		
		Nextstep		
HOME	-	den serves	ACCOUNT	
		-		

637 G G	24 Q -	0.44
	Chicken and B	
	Timer complete Progressing in 4 se	All and the second s
	Togroooling in a loo	Contras
CANCEL		
	Wolcow	
Stir fr	v	
-	A.	
	-5 *F 350 *F	+5 °F
		1 - 2 C
	Cooking comple	te!
	-30 sec +30 s	ec
Add of	hicken	
10.00		
*	Nextster	1
	đ	8
HOME	80CP15	ACCOUNT



What's left to do?

- Features
 - Web Scraping Integration into App
- Stretch Goals
 - Sorting filters for recipes in app
 - Running pan recognition during recipe, instead of only once
 - Adding automation features to manual mode (ex. start timer on ingredient addition)
 - Saving recipe state when app disconnects from cooktop
- Other Tasks
 - Collect data from new pans to train model
 - Make timers smoother
 - Include box for pan ID
 - Create pan not on cooktop feedback box

Questions?

