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

Team Whirlpool

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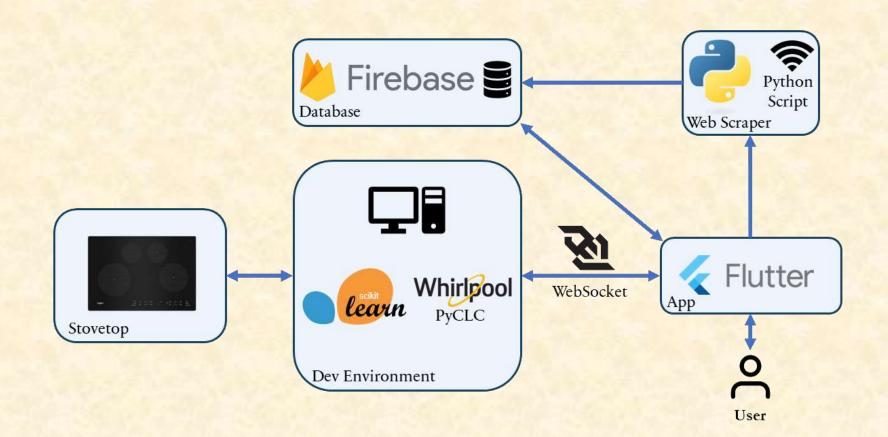


From Students... ...to Professionals

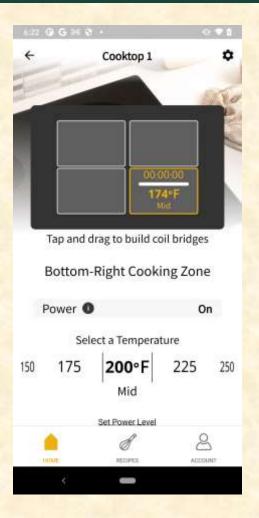
Project Overview

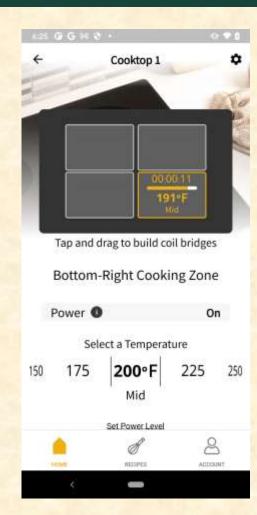
- Automatically detect what pan is being used for cooking
- Detect when ingredient has been added to pan using sensors and temperature
- Dynamically adjust recipe for user, improving auto progression
- Seamless and intuitive integration with app to make cooking easier for user
- Web scraper and database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

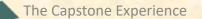
System Architecture



Manual Control





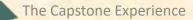


Pan Recognition

| 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 | |
| номе | er and a sector a sec | ACCONINT |
| | - | |

Timers and Preheating

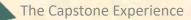
| 633 @ G H Ø +0 ♥ 0 | 6.34 G G ⊠ Ø • O ♥ D |
|----------------------------------|--------------------------|
| Chicken and Broccoli … 🌵 | Chicken and Broccoli … 🌵 |
| Cut broccoli | Cut broccoli |
| Preheat Cooktop | Preheat Cooktop |
| | 6 Add olive oil |
| | -5 °F 350 °F +5 °F |
| | Time left: 0:23 |
| 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?

