Project Plan Presentation
Recipe Progression Tracking

The Capstone Experience

Team Whirlpool

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Functional Specifications

• Revolutionize cooking experience
• Make recipes available in a single, easy to use location
• Collect user data to enhance cooking skills through modern technology
Design Specifications

• Connected mobile and smart watch apps
• Access library of Whirlpool recipes
• Data collection for improving algorithms
• Built in timer support for timed steps
• Automatic, gesture, and manual step progression
Screen Mockup: Main Screens

- Recipes Screen
- User Screen
  - Recipe history
Screen Mockup: Cooking Process

1. Pour cup of milk
2. Stir for 2 mins
3. Stir for 2 mins
4. You're done!
Screen Mockup: Gesture Step Progression

- Set Your Gesture Step Progression Movement: Start Collecting
- Collecting Your Gesture Step Progression Movement: Stop Collecting
- Data Collected for Gesture Step Progression Movement
Screen Mockup: Cooking Process pt.2

Recipe
Pour a cup of milk

Recipe
Stir For 1 Min
0:00:59

Recipe
Stir For 1 Min
0:00:00

Recipe
Finished!

Next Step
Pause
Next Step
Back to menu
Technical Specifications

- Apple Watch – Swift on WatchOS
- iPhone – Swift on iOS
- Database Server
  - Collect labeled cooking data from WatchOS app
- Machine Learning Algorithms
  - Neural Network or Logistic Regression Algorithms
  - TensorFlow and Python
  - Trained on server and database
System Architecture

Front-End
- iPhone
- iOS
- Watch
- watchOS
- Recipes
- Sensor Data
- Developed in Swift

Back-End
- TensorFlow
- MySQL
- Ubuntu Server
- REST API
- One-time Recipe Dump
System Components

- **Hardware Platforms**
  - Apple Watch
    - Sensor data collection
  - Apple iPhone
  - Rack-mounted server/Virtual Machine server

- **Software Platforms / Technologies**
  - watchOS
  - iOS
  - Xcode/Swift
  - Ubuntu Server
  - MySQL
  - TensorFlow
Risks

• Risk 1 - Data Storage Specifics
  ▪ Research efficient storage solutions
    o Decide on server/database architecture

• Risk 2 – Connectivity
  ▪ Getting data from wearable device to database
  ▪ WatchOS and IOS app displaying in unison

• Risk 3 – App Distribution
  ▪ Recording data while disconnected from iMac
  ▪ Deploying app locally
Questions?