

MICHIGAN STATE

U N I V E R S I T Y

Alpha Presentation

Recipe Progression Tracking

The Capstone Experience

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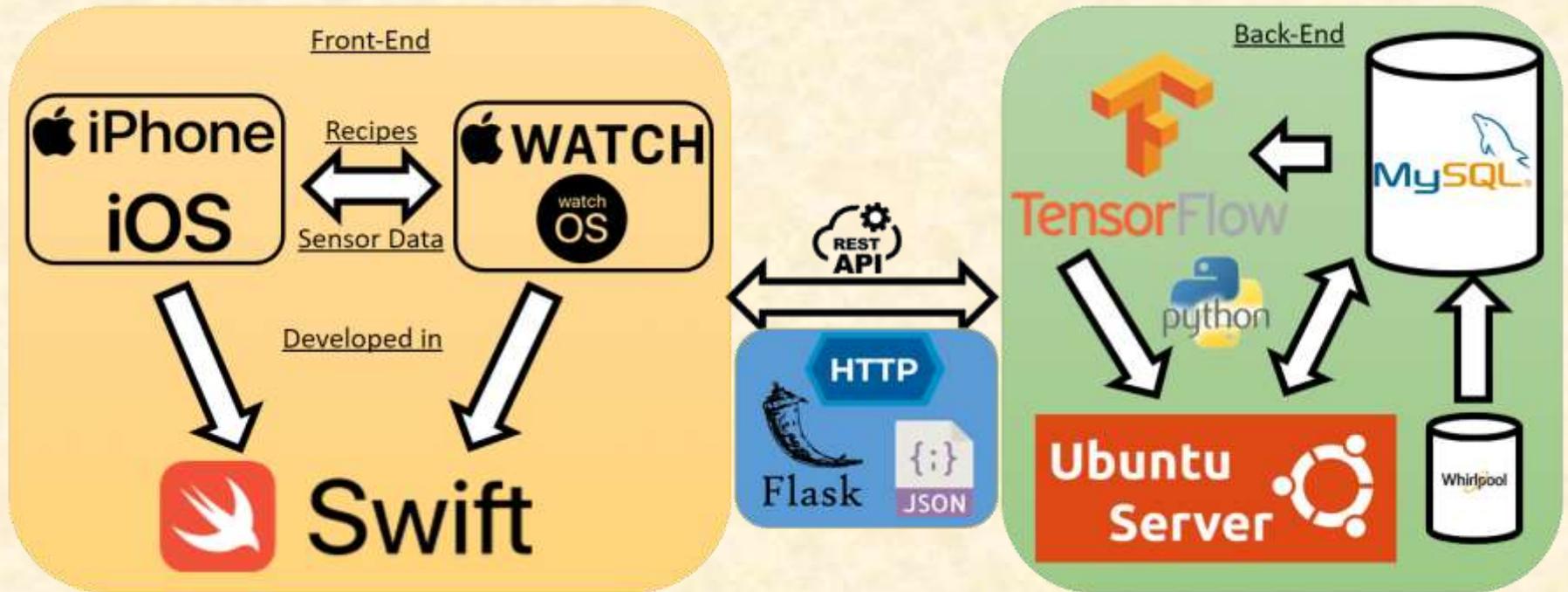
*From Students...
...to Professionals*

Project Overview

- Motion Sensor Data collection of cooking actions
- Mobile and Watch applications
 - Collect and store user cooking data
 - Utilize Machine Learning (ML) algorithm
- Develop ML Algorithm
- Identify current step of recipe
 - Learn optimal cooking method(s)
 - Provide user guidance while cooking



System Architecture



Recipe Steps Page



Spaghetti

Easy weeknight friendly spaghetti and meat sauce that's made completely from scratch. Use ground beef, turkey, pork, chicken or lamb to make this simple spaghetti recipe.

- 1) Bring a pan of water to the boil and season it with salt.
- 2) Add the spaghetti and stir it gently until all the strands sink beneath the water level. Stir again to make sure they're not stuck together.
- 3) Cook following the pack instructions but taking 2 mins off the time suggested.
- 4) Check the pasta when the time is up by biting into a strand – it should be cooked through but still firm. Cook for a further 1-2 mins if you need to, or if you prefer your spaghetti softer.
- 5) Drain, reserving a little pasta water to add to the sauce. Add the pasta to the sauce straight away so it doesn't stick together as it cools.

Start Cooking!



Gesture Motion Being Recorded



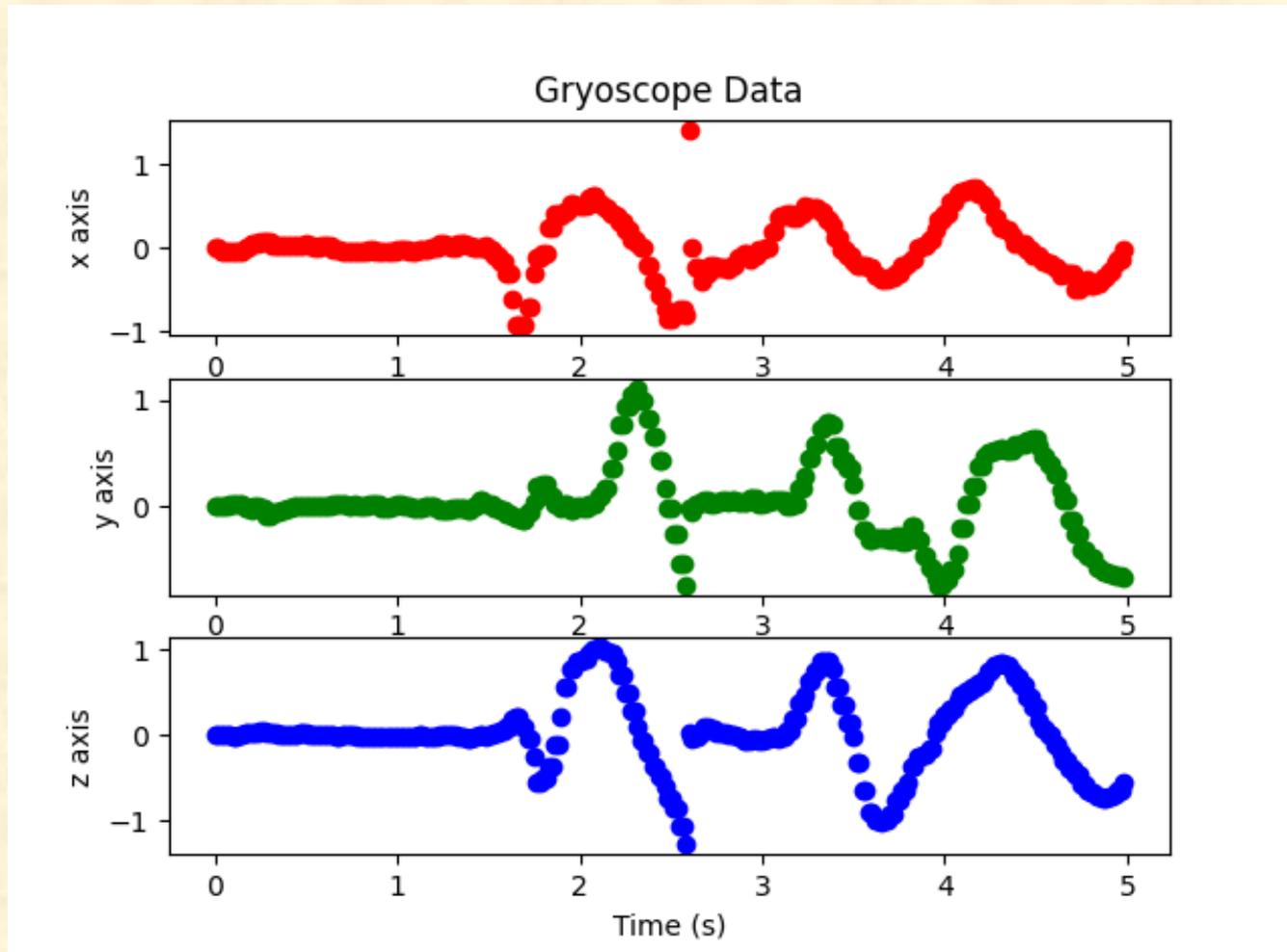
Motion Data Being Recorded



App Demo



Data Graphed by Backend



What's left to do?

- Develop and tune ML Algorithm
- Incorporate recipe library into app
- Data storage on Database
- Complete and fill UIs
- Incorporate app back end with front end



Questions?

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