

JOG EASY

MULTIMODAL INTERFACE COURSE

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MASTER IN
COMPUTER
SCIENCE

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Review

- Android App JogEasy for Joggers
- Need gap identified through talks
- Touch free experience needed by joggers for Winter and Summer
- Combining two modalities – Gesture and Voice for touch free experience



Features

- GPS tracking
- Displaying the track on Google Maps
- Displaying speed, time, distance
- Track details on graphs(speed/time, altitude/time)
- Storing of the tracks for future review
- Gesture Recognition
- Voice Recognition

Resources

- Android SDK
- Google Maps
- Eclipse
- PocketSphinx 0.8
 - Created own dictionary
 - Very precise for our needs

Multimodal

- Input:
 - Physical gesture (touch and movement)
 - Speech
- Output:
 - Visual modalities

CARE

- **Equivalence**

- Voice + Gesture || Touch

- **Complementary**

- Voice + Gesture

- **Assignment**

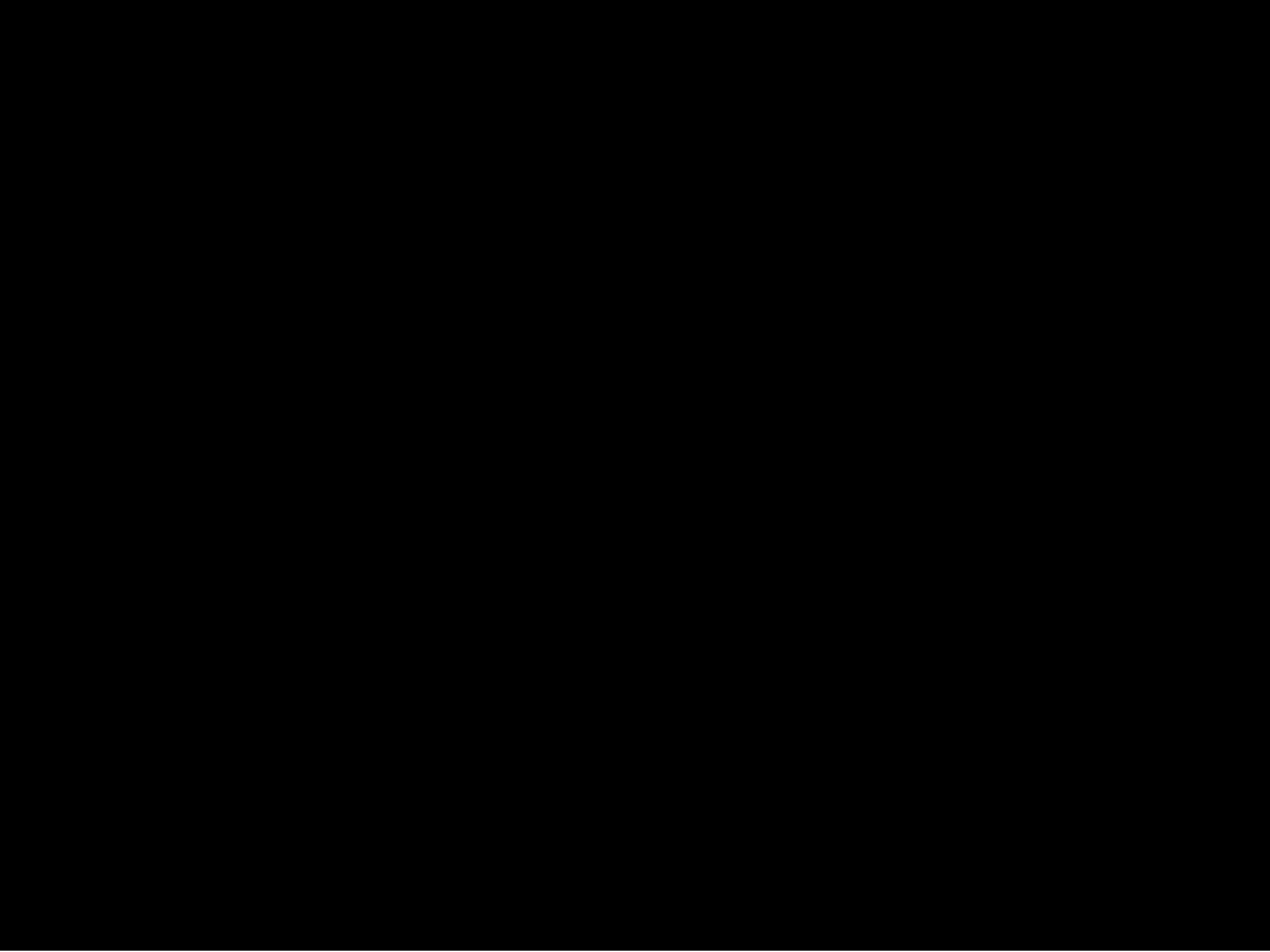
- Touch

CASE

- **Alternate**

- Gesture -> Voice -> Gesture





User Evaluation

- T-test performed to check if there is significant difference in time of using the app with or without modalities
- Test Users divided into two groups of 5 each
- Test Group 1 : Non multimodal app
- Test Group 2 : Multimodal app
- Basic usage explained through a presentation
- Time of use recorded
- No significant difference recorded
- Both versions of the app revealed to the test users
- Small interview conducted to check reaction to the app

User Evaluation

- Test users preferred to have the modalities in the app and found them exciting
- Most agreed they would use the modalities if made available
- One user felt modalities were not as necessary and the app worked fine with touch
- One user suggested that the app should run constantly while running to display statistics and have the ability to show statistics

Conclusion and Future Work

- Successfully combined two modalities and developed an android application
- High ability for voice recognition due to a 2 word dictionary
- Internet free voice recognition through PocketSphinx
- High ability for gesture recognition
- Maps other than Google Maps
- Keep the app running for recognition during the jog
- Calories burned
- Play Store

Thank You!!

Questions?