How’s My Driving: Sensing Driving Behaviors by Using Android Devices

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Motivation

- 10.8 million car accidents in 2009, which means 1 in 27 each year [US Census Bureau]
- 44,757 annual death, which means 1 in 84 death during lifetime [National Safety Council]
- Driver may not always realize how dangerous they are: distracted or drunk or poor skills

Rating System Highlights

- Rating the driving quality of the drivers
- Smart phone/tablet build-in sensors: Accelerometer, Gyroscope
- Movement-aware coordinate projection: works under arbitrary device rotation
- Comparing with passenger ratings: as smart/justice as human beings

Coordinate Projection

1. Extract stop intervals
2. Project phone to earth
3. Extract car moving straight intervals
4. Check if the car is moving ahead or reverse

Projection Steps

Acceleration and Brake

1. We send a tablet to your office
2. You put it in your car, and drive a couple of days
3. We get the tablet back from your office
4. We will let you know how’s your driving, and how to earn a discount on car insurance

Call For Volunteers

Talk to us off-line or send us an email at lkang@cs.wisc.edu and/or suman@cs.wisc.edu

Projection Results

Driving Behaviors

Correlation Between Passengers and Our system

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