Bringing Voice and Artificial Intelligence into the Connected Car

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The connected car

≠ mobile phone or IOT device on wheels

Provides internet access while meeting on demand transportation needs

Includes hundreds of sensors

High level of cognitive attention

Multi user and multi screen environment
Why people drive?

- Home
- Buy goods
- Go to work
- Get/eat meal
- Drop someone off
- Visit friends/relatives
- Buy services
- Other work related
- Buy gas
- Shopping/errands

Share of driving trips

Average duration
Driver’s frustrations

- **Being stuck in traffic**: 70%
- **Searching for car parking spaces**: 53%
- **Getting lost**: 34%
- **Feeling the pressure of being on the road**: 22%
- **Feeling scared of having an accident**: 19%
- **Wasting time when I could be more productive**: 10%
- **Searching for car parking spaces**: 9%
- **Feeling bored**: 5%
- **Having passengers**: 5%
- **Feeling the pressure of being on the road**: 1%
- **Don’t know**: 1%
- **Other**: 5%
- **Not applicable - there is nothing I dislike about driving**: 8%

Not applicable - there is nothing I dislike about driving
Driving related needs

Help me manage my trip door-to-door
Help me to be more productive whilst traveling (e.g. get some work done through dictating reports, e-mails, conference calls etc.)
Help me to manage my conversations with family and friends (e.g. send e-mails or text messages if I’m running late)
Show me the sights and provide interesting information on destinations
Act as my guide and be able to find the best routes, hotels and parking spaces
Entertain and inform me (e.g. put together news, music, videos and other content I like)
Help me to manage my schedules and optimise my planning
Help me to deal with car diagnostics, reported issues, and understand new car features
Help me stay connected with my home and other smart devices (e.g. switch a home alarm on/ off, open garage door, home lights on)

None of these
Don't know

41%
10%
21%
22%
27%
58%
13%
20%
13%
8%
The Automotive Assistant

Assists you throughout your journey

Perfectly meets your driving related needs

Thinking for you to help you stay focused on a safe drive
Perfectly meet driving related needs
Interaction

- Voice Biometrics
- Natural Language Understanding
- Collaborative Dialog
- Intelligent Output
- Multi User
- Speech Technologies
Multi user

Multiple user interact with the Automotive Assistant

Remove user interferences

Identifying speakers to contextualize and personalize the experience
Artificial Intelligence

- Predictions
- Learning from Data
- Contextual Reasoning
- Personalization
- Meaning Extraction
Finding the perfect car park

“Find Parking near the Sears tower”

35 results on a crowded GUI

Impossible to filter while driving… not to mention unsafe!
Collaborative AI

“Find Parking near the Sears tower”

“Something cheaper”

Contextualized & Personalized Recommendation

“OK, and let John my arrival time”
Using knowledge

- User: Payment preference or price sensitivity
- Vehicle: Location, destination, ETA, fuel level, passengers
- Online: Parking location, restrictions, operating hours
Using contextual reasoning

Personal  Does the car park have handicap access?
Spatial    Is the walking distance less than 5 minutes?
Temporal  Will the driver get there before the closing time?
The Automotive Assistant in action
Automotive Assistant

Designed for AUTOMOTIVE

Combines AI, KNOWLEDGE and INTERACTION

Delight and perfectly meet DRIVER NEEDS
Thank you

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