Smart Automotive Voice Assistants

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Cerence – AI For A World In Motion

• Market leader for innovative speech assistance in the automotive & transport industry

• We build advanced voice recognition, gaze & gesture technology and AI based solutions.

• We provide services from concept research, UI design, engineering, testing to UX validation

• We offer both plug & play domains and highly customizable solutions

• For more information: https://www.cerence.com
Current Challenges in Automotive Voice Assistants

Why do we need smart?

• Nearly three-quarters of drivers will use an in-car voice assistant (VA) three years from now\(^1\)
• Current experiences around car discoverability: excitement, frustration, Feeling of being lost, confusion\(^2\)
• Inexpressive text-to-speech voice output & inflexible grammars for input (decrease experience)\(^2\)


\(^2\) Cerence Insights
How can we tackle this?
The Carlife Project

Solution Path

Create a seamless journey

Get users to use the system

Make it feel natural

Natural Behaviour

Proactivity

One Assistant
Create a natural experience by understanding whatever the user says and reacting in an authentic way.
Natural Behaviour

Realizing an authentic voice assistant that speaks in a natural way.
Natural Behaviour

Realizing an authentic voice assistant that speaks in a natural way.

DISTRIBUTION OF USER RATINGS

- Human voice
- Neural TTS
- Old TTS

n = 100
Proactivity on Time

Get users to use the system by approaching them in the first place, ensuring the right timing.
Proactivity

A framework that monitors for the perfect timing

**What**
- In-Car Feature Teaching

**When**
- User Pattern Monitoring
- Driver State Monitoring
- Environment Monitoring
- Sensor Monitoring

**How**
- Multimodal
- Voice or GUI only
- Non-verbal or verbal
Proactivity

Smart Onboarding – Increase discoverability and usage by teaching users contextually relevant features.

CarLife Assistant
Proactive checklist

- No safety-critical event
- Close to destination
- Entering parking area
- ...
- ...
- ...
- ...
- ...

I remember you were interested in SmartParking.
Is now a good time to tell you more?
One Digital Assistant

Create a seamless hassle-free journey by merging the experience across platforms and car ownerships.
One digital Assistant

Enhancing UX by learning User Patterns.

• Which features have been taught already?
• Which features are relevant and interesting to the user at all?
• Who do they call often?
• How do they like their seat and temperature settings?
• What can we offer suiting their lifestyle? (Even before purchasing with Carlife Car Search)
• ...
One digital Assistant

Advanced Lifecycle Management across car ownerships: **no second setup**

→ Remember settings & take over simply everything, seat settings, Spotify playlists, payment details, privacy and configs, subscriptions to other services, ...

→ Multi-platform, seamless communication across lifecycles that increases overall experience.
Thank you!

Want to talk UX?

Feel free to reach out: 
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