

VENTUS TECHNOLOGIES | MERCEDES-BENZ

High-Resolution Road Weather for the Automotive Industry

Mercedes-Benz and Ventus are redefining range forecast with cutting-edge road weather models, currently focusing on the impact of wind.

THE CHALLENGE

Mercedes-Benz and Ventus integrated high-resolution wind forecasts into the Electric Vehicle (EV) range estimation, recognizing that wind can account for up to 20% of total battery consumption. Traditional weather models, with their rough resolution, fall short in accurately predicting near-surface winds.

THE SOLUTION

The solution integrated advanced wind forecasting technology with detailed topographical and vegetation data to refine near-surface wind predictions. This collaboration led to the development of a sophisticated model that provides precise range estimations for EV drivers. The project was a collaborative effort of Mercedes-Benz's R&D and Ventus's meteorological team, overcoming challenges through iterative testing and data integration to ensure the model's accuracy and reliability.

THE OUTCOME

The project successfully delivered a solution that enhances wind forecasting accuracy by up to 50% and significantly enhances the EV range predictions. Mercedes-Benz uses range predictions in their customer-facing trip planning system to plan charging stops.

VENTUS TECHNOLOGIES

WEBSITE

ventus-tech.de

FOUNDED

2022

HEADQUARTERS

Stuttgart, Germany

NO. OF EMPLOYEES

1-10



Ventus Technologies achieves precise EV range estimations with advanced weather models.

Ventus Technologies's service enhances range forecast for EVs and autonomous driving through advanced road weather models.

ABOUT STARTUP AUTOBAHN

STARTUP AUTOBAHN powered by Plug and Play is an open innovation platform that provides an interface between innovative tech companies and industry-leading corporations. The basis of the program is the partnership that develops between startups and the corporate business units. The two entities hold an equal footing from the get-go: together they evaluate the potential for a joint venture, move forward to pilot the technology, and work to achieve the ultimate goal – a successful production-ready implementation. Designed with the intention to exceed startup acceleration, STARTUP AUTOBAHN powered by Plug and Play moderates a community for collaboration with a focus on implementable results. Over the years, the platform has successfully cultivated over 400 projects with more than 300 startups since its founding in 2016.

ACKNOWLEDGEMENTS

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