Gurobi + Audi

CASE STUDY



Solving Complex Logistics Challenges in Seconds

Audi transformed a three-week manual planning effort into an automated solution.

We offer Gurobi as a service, and we provide our services in two distinct ways.

The first way is a more manual process where customers come to us with their data, and we compute an optimal solution for them, tailoring it to their needs. They send us their data, and we send back the solutions.

The second way is through applications that customers can use themselves. They input their data into a system they're already familiar with, and we implement something like an "optimize" button. This allows them to receive optimal recommendations directly within the applications they already know.

In automotive logistics, there's a particular problem that stems from the high complexity of parts. We offer customers many customization options, with the steering wheel being a great example. For one car, there might be 40 different steering wheels, and we can't place them directly at the assembly line due to limited space.

So what we do is pre-sequence the parts, placing them in a designated logistics area where they're brought into sequence. Then, they're transported to the assembly line in the correct order for the cars being built.

This used to be a massive manual planning effort, where eight people would lock themselves in a room for three weeks, cutting out paper snippets to place them on a layout of the logistics area to come up with a good solution. Now, it's just the press of a button away.

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> Philipp Münch,
> Data Scientist, Audi

Industry	Automotive
Location	Global
Use Cases	Logistics, Production, Resource Optimization
Website	www.audi.com

Audi stands for sporty vehicles, premium workmanship, and progressive design – for "Vorsprung durch Technik". Founded in 1899 by August Horch, the Audi Group—which also unites the Bentley, Lamborghini, and Ducati brands under one roof—is currently one of the most successful manufacturers of automobiles and motorcycles in the premium segment.

Results

- What used to be a three-week manual planning effort is now achieved in seconds

Experience Gurobi for Yourself

Our 30-day evaluation license includes:

- Free benchmarking services
- Free model tuning services
- Free access to our world-class technical guidance and support

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By Philipp Münch, Data Scientist, Audi

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