Jedha

getaround

Discover the new way to rent a car

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Business Challenge & Product Objectives

❖ Getaround's Challenge 🚗 🚙

When a car is returned **late**, it directly **affects the next rental**.

The next driver may have to wait, report the issue, or cancel — which hurts **customer satisfaction** and **platform reliability**.

❖ Goal of the analysis ⏳

Help Product Managers decide:

1. What **minimum buffer time** should be enforced between two rentals
2. Whether this rule should apply to **all cars or only Connect cars**

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Machine Learning Model & API Deployment

❖ Machine Learning Model - Random Forest 🌳🌳🌳

- **Predicts daily rental price** from car characteristics
- **13** raw features → **55** encoded features
- Tracked and validated with **MLflow**

❖ API Deployment on Hugging Face 🤗

- FastAPI endpoint **POST /predict** returning price predictions
- Includes `/docs` + `/swagger` for testing
- Containerized using **Docker** for reproducibility

❖ Workflow Overview 📦

Model training → MLflow tracking → joblib model → FastAPI → Docker → Hugging Face

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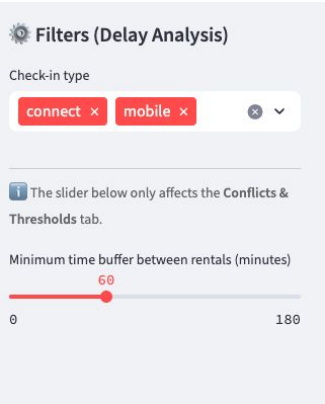
Model performance comparison in MLflow

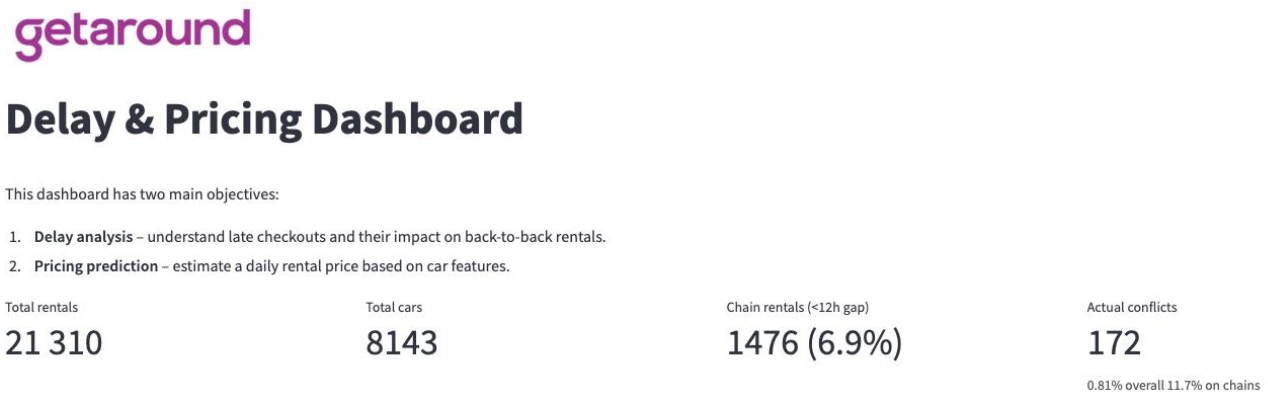
Metrics			Parameters					
MAE	R2	RMSE	max_depth	min_samples	model_type	n_estimators	n_jobs	random_state
12.115349412635931	0.6937216646720405	17.96050165342624	-	-	LinearRegression	-	-	-
11.737539785592471	0.7065594411808537	17.58006167254719	8	5	RandomForestRegressor_v1	100	-1	42
11.085912477358228	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor_v2	200	-1	42
11.085912477358228	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.085912477358228	0.7257955529369504	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.08591247735823	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.085912477358228	0.7257955529369504	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.085912477358228	0.7257955529369504	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.08591247735823	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.085912477358228	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.08591247735823	0.7257955529369503	16.994076570315258	10	5	RandomForestRegressor	200	-1	42
11.265455152515111	0.7272473561196326	16.94902843446507	3	-	GradientBoostingRegressor	200	-	42
10.772713122280587	0.7337574174927829	16.74553712370487	12	5	RandomForestRegressor_v3	300	-1	42
10.647702413834864	0.7352144784906367	16.699652759865593	15	2	RandomForestRegressor_v4	200	-1	42

Live Demo – Exploring the Getaround Dashboard

The dashboard deployed on Hugging Face allows Product Managers to **explore delays**, **conflicts**, **minimum buffer time** and **pricing predictions** from the machine learning model.

🔗 **App URL:** https://andreea73-getaround-delay-pricing-dashboard.hf.space/





Thank you for your attention
– any questions?