

# Alpiq challenge

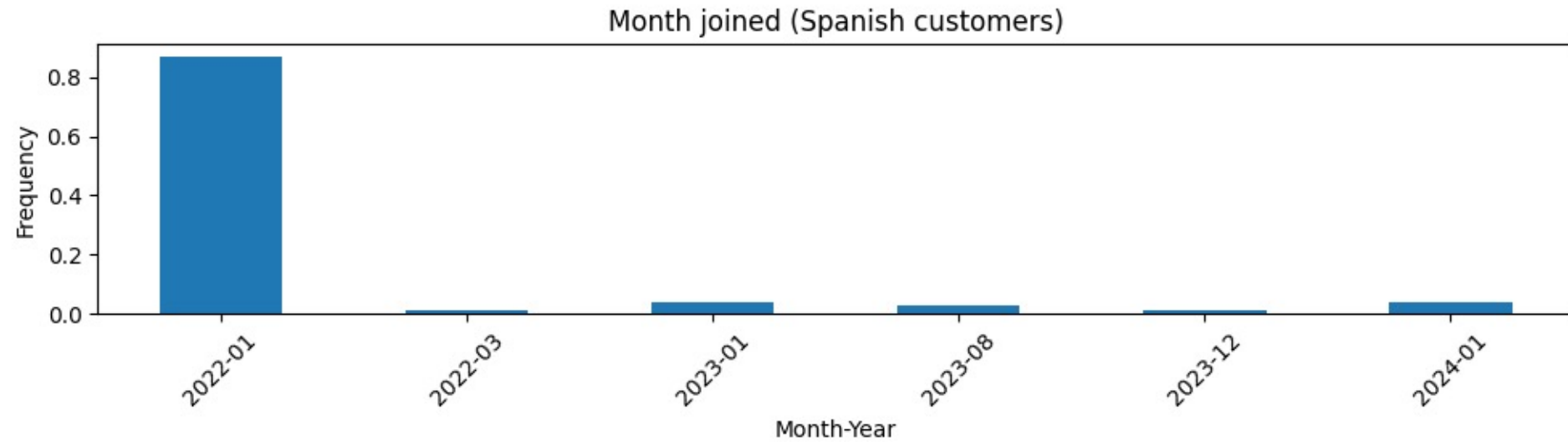
Georg Brunner, Susanna Pesonen, Karin Nakanishi

# Portfolio forecast

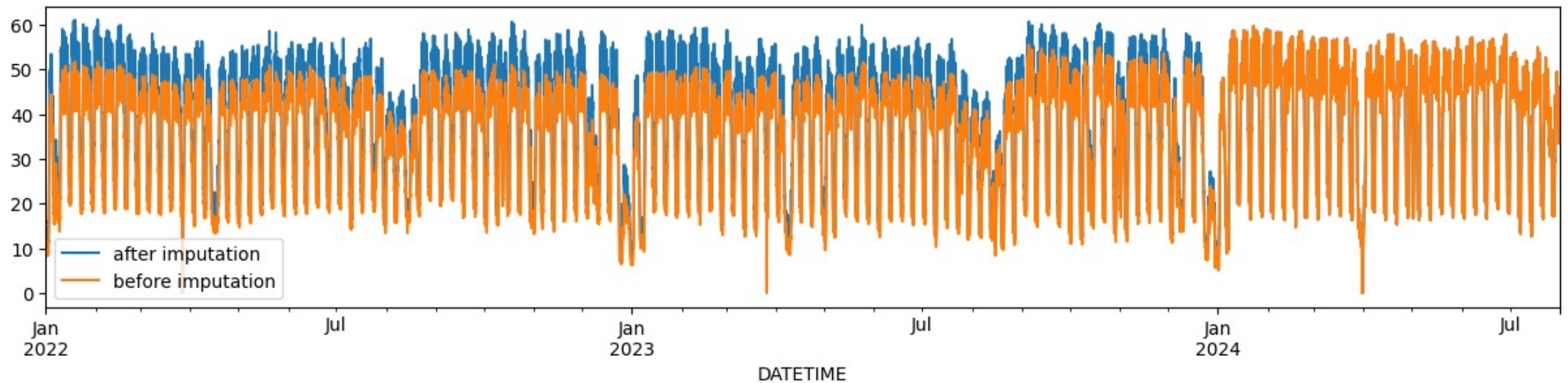
# Factor 1: Customer acquisition



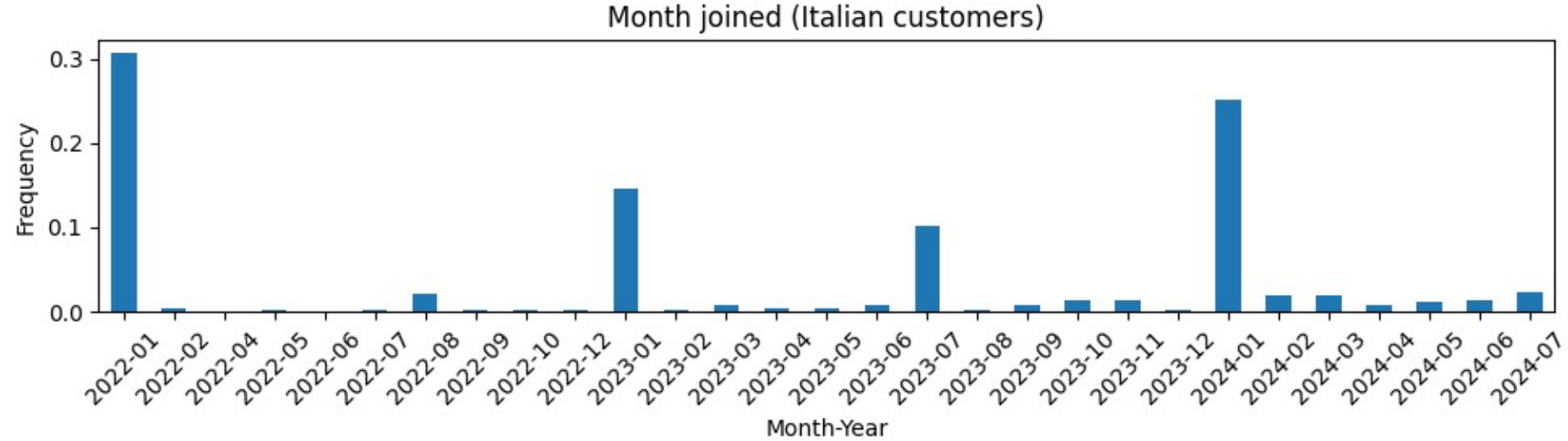
Spain: Impute missing data with “most correlated customer”



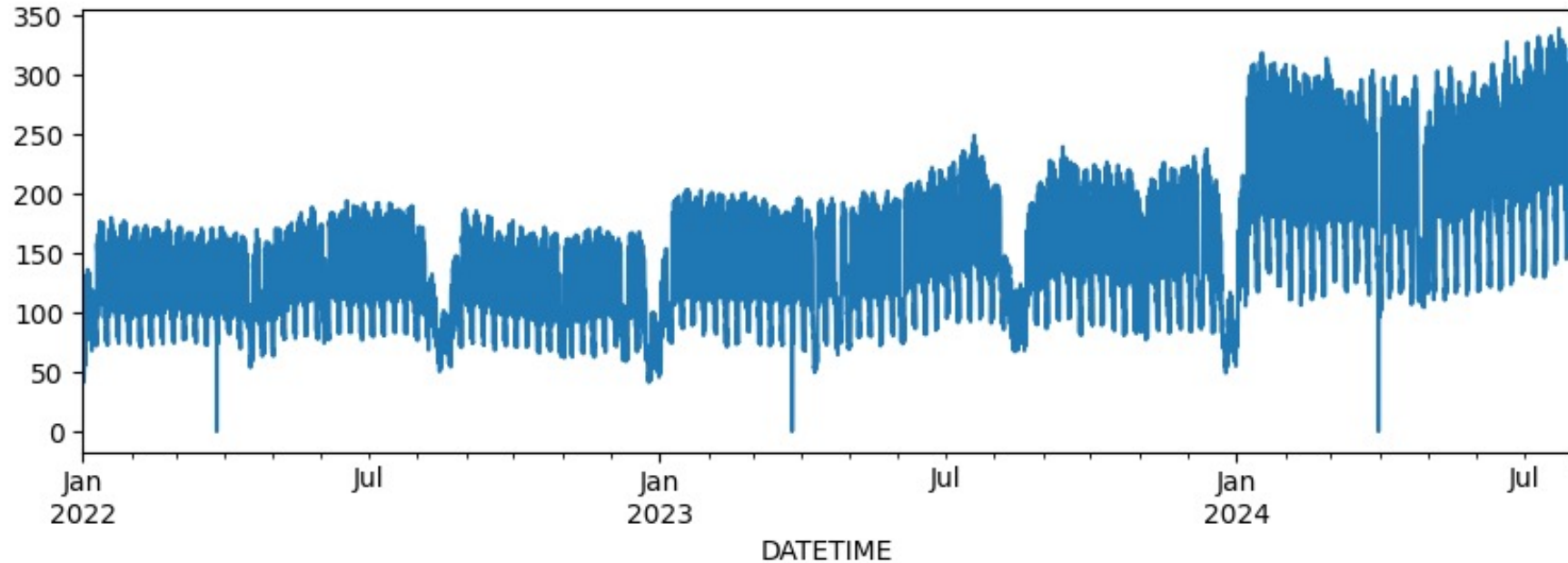
## Portfolio consumption



# Italy: take median of customers



## Portfolio consumption

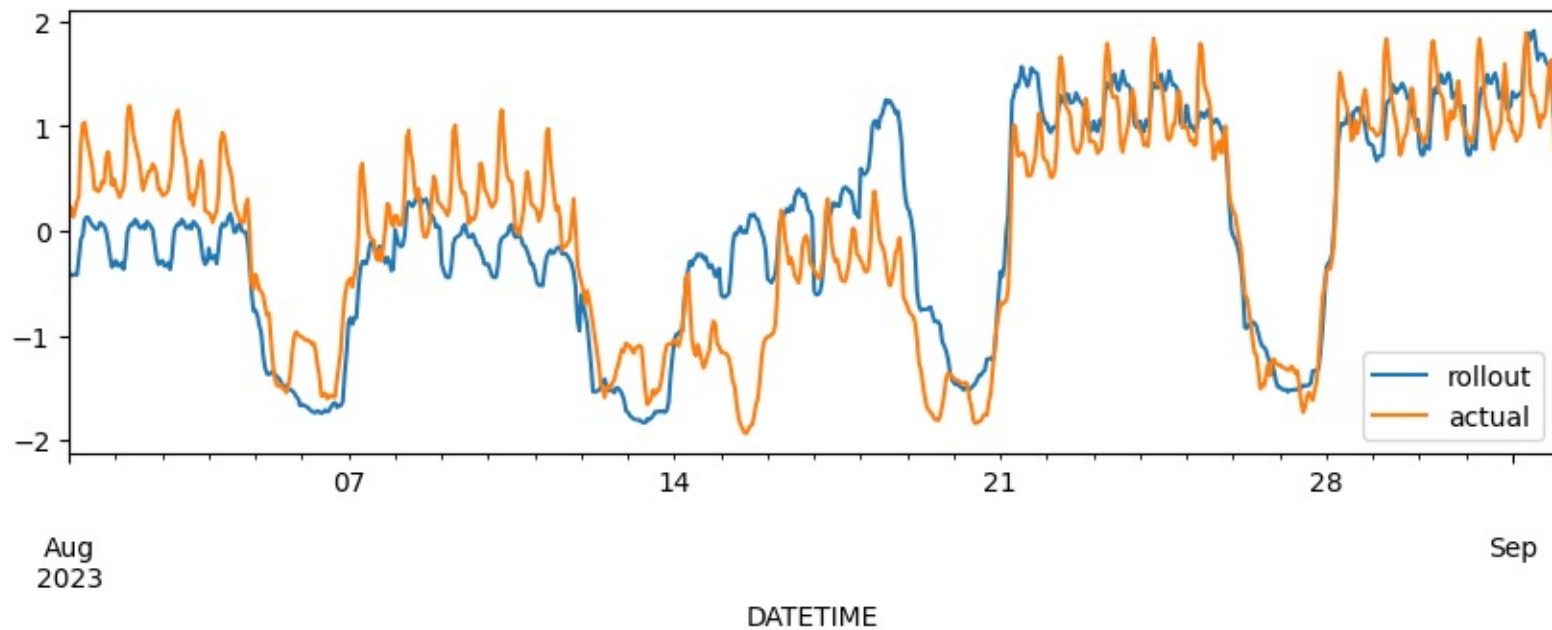
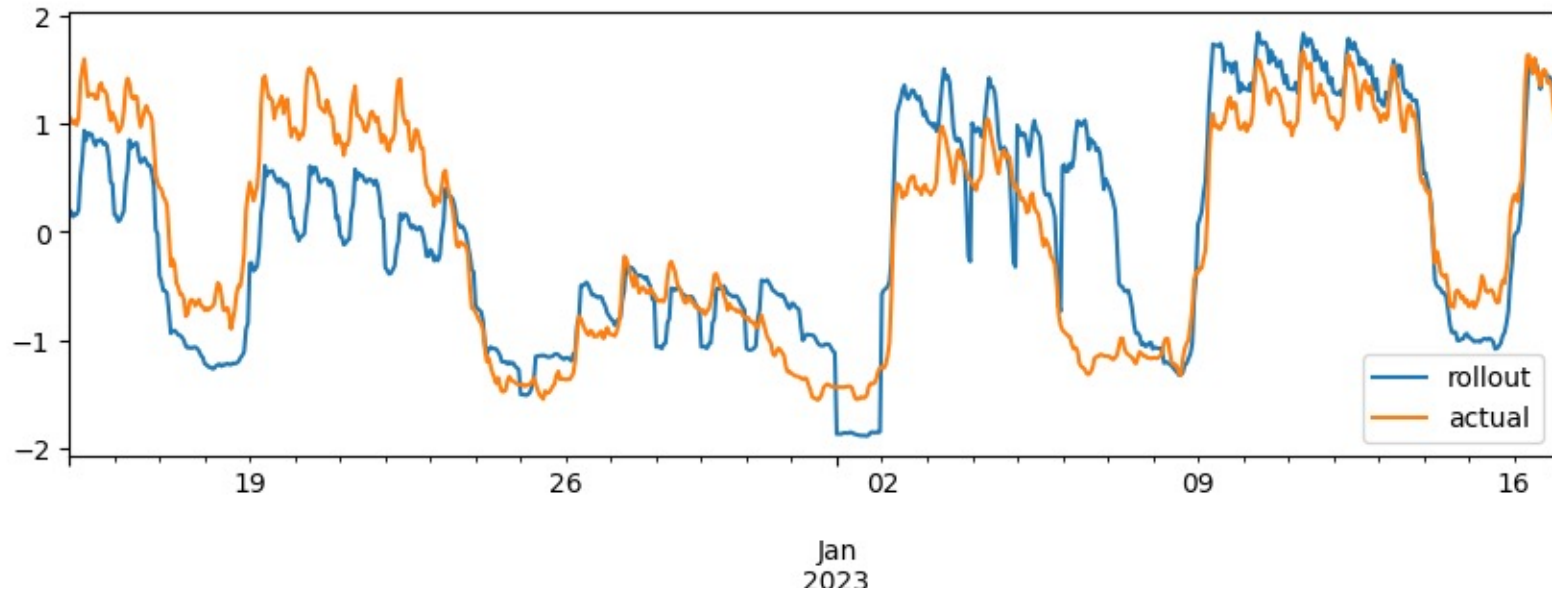


## Factor 2: Holiday

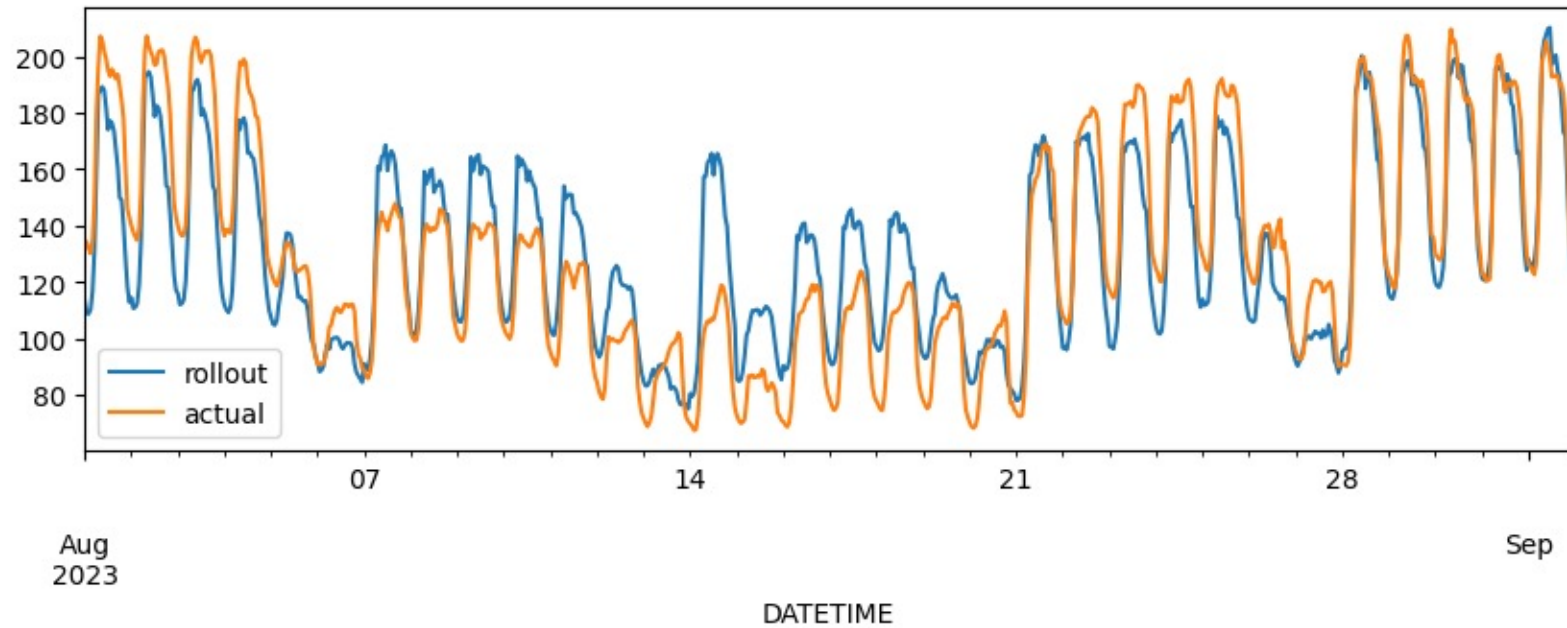
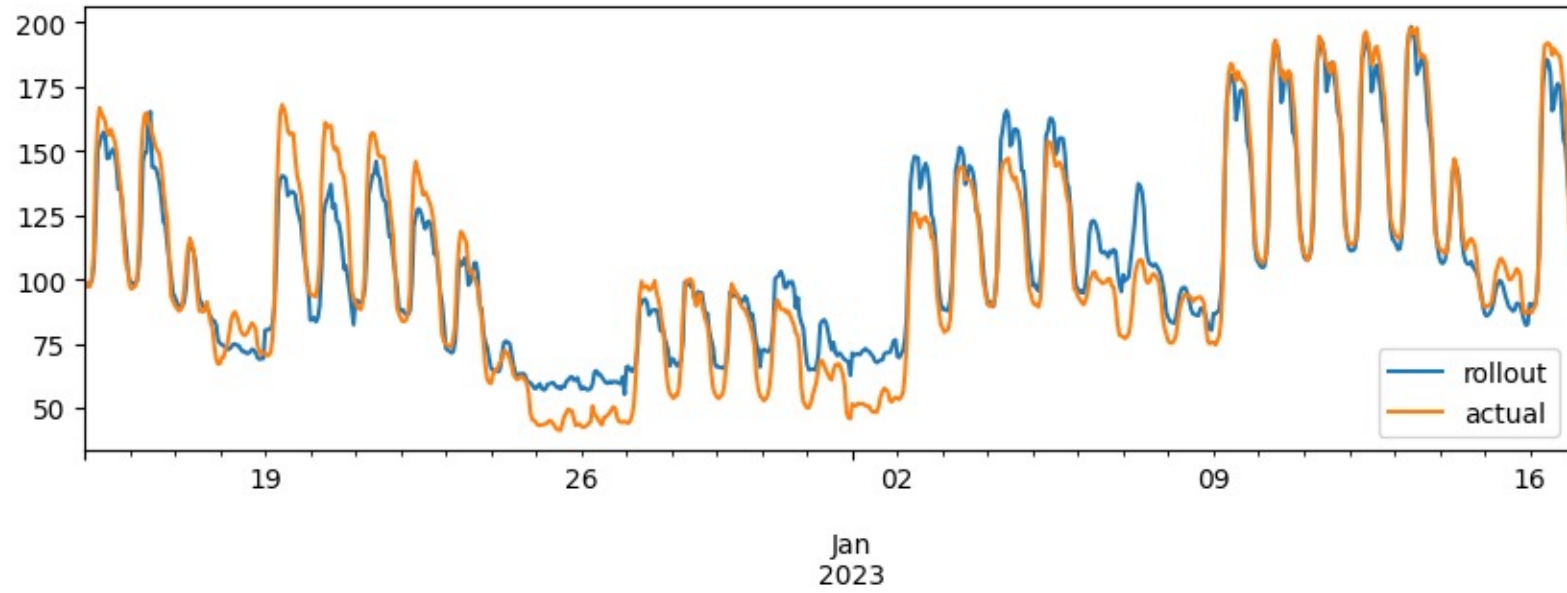
```
Feature Importances:  
      Feature  Importance  
1  is_off_day    0.813163  
0   rollout    0.110830
```



# Spain



# Italy



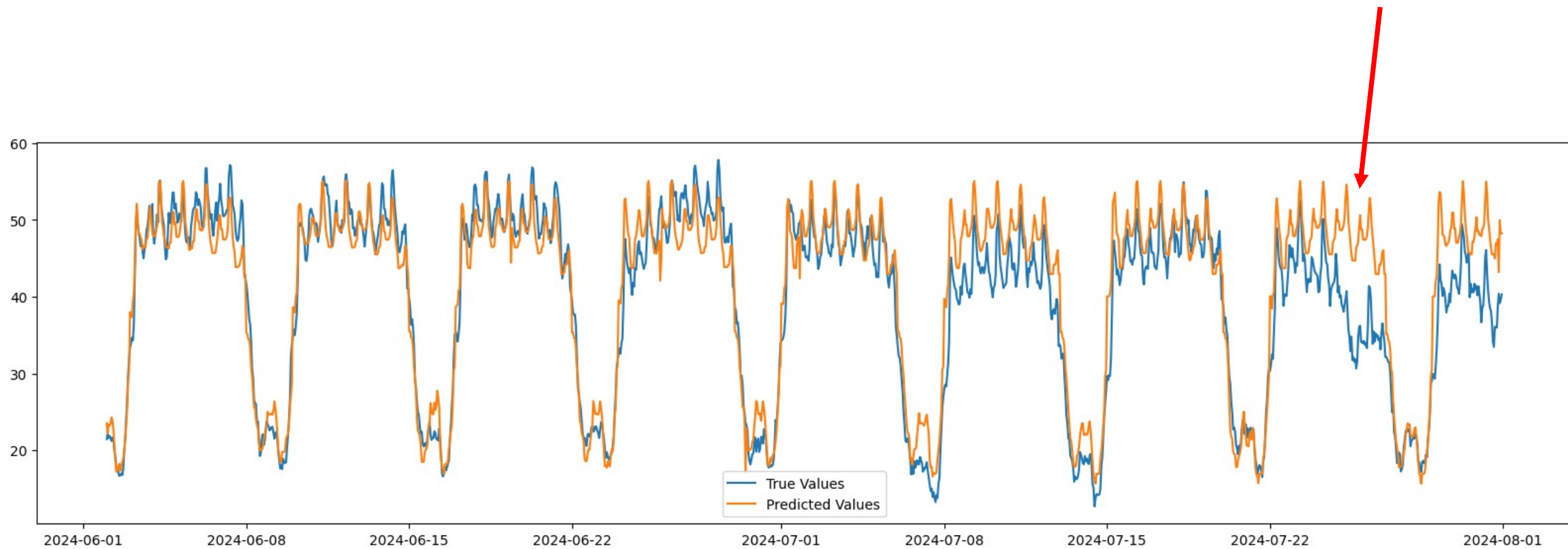


Individual forecast

# Some customers left Alpiq

- Only NaNs and/or zeros
- 1 in Spain, ~30 in Italy

Location (local holiday) matters!



# Results

Model: Gradient boosting regressor

Baseline	Portfolio	Portfolio + individual (linear model)	Portfolio + individual (tree model)
826344	681276	384063	354484