**Hotel Cancellations Prediction for Revenue Optimization**

**Problem statement:**

* Hotel cancellations are unpredictable and pose significant challenges for revenue management. However, by analysing past cancellation data, hotels can develop predictive models to forecast cancellations and optimize operations.
* The key goal of this thesis is to create an accurate predictive model for hotel cancellations using reservation features like lead time, length of stay, daily rate, and special requests. With advanced notice of possible cancellations, hotels can proactively manage inventory, pricing, and staffing to maximize revenue and guest satisfaction. The model provides actionable insights to mitigate financial and reputational risks of last-minute cancellations.
* By leveraging predictive analytics, hotels can turn cancellations from a source of uncertainty into an opportunity for competitive advantage and improved financial performance. This thesis presents a data-driven methodology for cancellations forecasting that enables proactive and strategic revenue management.

**References:**

* [**https://www.kaggle.com/datasets/menckenjr/hotel-bookings**](https://www.kaggle.com/datasets/menckenjr/hotel-bookings)