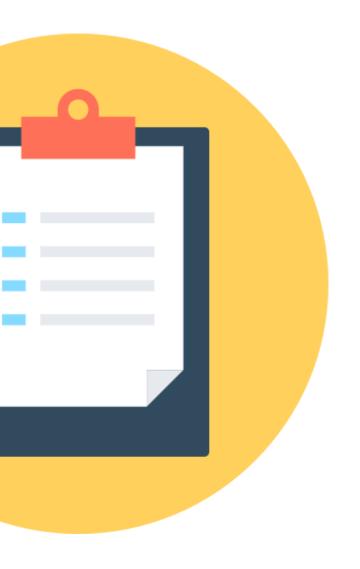I ❤ innovation

CAPGEMINI x ACCOR
Data Project

Application of NLP techniques to the Bokan 39
hotel business case

Capgemini X ACCOR

Louis Bertolotti, Hugo Ehlinger, Khouloud El Alami,
Aya Errajraji, Maxime Redstone Leclerc

Agenda

1. As-is & To-be Analysis

2. Scoping

3. Methodology

4. KPIs

As-is & To-be Analysis

What are the current problematics affecting Bokan 39 and what future opportunities are there ?

Accor faces multiple challenges that could be overcome thanks to an in-depth analysis of customers' post-Covid behavior...

AS-IS / TO-BE ANALYSIS OF ACCOR'S ONLINE PRESENCE

SECTOR	AS-IS	TO-BE
TARGETED CLIENTS	**Wealthy Customers** + **High** margins + **Word of mouth** reputation - Lack of **price segmentation** - Highly dependent on City's **financial activity**	**Maintain** • **High standing** of the main restaurant offering **Improve** • Get inspired from French Michelin-star restaurants that also have a **"brasserie"** as part of the Bokan Klan concept to **expand price segmentation**, using **price** and **reviews** data from the data analysis

Accor faces multiple challenges which could be overcome thanks to an in-depth analysis of customers post-Covid behavior...

As-Is / To-Be analysis of Accor's online presence

Sector	**As-is**	**To-be**

Location dependence

On-site dining only

+ Delivers a **unique experience** linked to the site

- Highly vulnerable to **Covid-19 lockdowns** and general restrictions

- Lack of flexibility due to limited target market → additional clients are **lost** while **food stock losses** cannot be hedged by selling on **online platforms**

Maintain

- A **more limited** on-site dining to account for a weakened restauration market

- Rooftop during summer

Improve

- Potentially launch **delivery** and **click&collect** services based on the **NLP sentiment analysis** of the reviews

- **Rebrand the rooftop** for future events respecting Covid-19 health restrictions

Accor faces multiple challenges which could be overcome thanks to an in-depth analysis of customers post-COVID behavior...

AS-IS / TO-BE ANALYSIS OF ACCOR'S ONLINE PRESENCE

SECTOR	AS-IS	TO-BE

ONLINE PRESENCE

Strong social media presence but limited website

+ High number of Instagram followers

− Website UX/UI is quite outdated and **lacks readability**

− Instagram campaigns do not appear to **target a precise clientele**

− **Unclear** differentiating factor

Maintain

- The **Instagram** presence

Improve

- Improve the **responsiveness** and **design** of the website

- Launch Bokan Klan to target younger customers

- Expand Instagram campaigns by leveraging the tastes of **top Tripadvisor "influencers"**

... which will be performed with the help of state-of-the-art NLP techniques

DATA PIPELINE AND TOOLS WHICH WILL BE USED TO PERFORM THE ANALYSIS

Data Collection

Scrapy

- o Data collection using a Scrapy spider
- o 3 tables are generated in JSON format: restaurants, users & reviews

ETL

pandas

- o ETL operations in pandas to preprocess the data
- o Cleaning and lemmatizing user reviews using NLTK

Modeling

TextBlob

- o NLP tokenization using Hugging Face
- o Sentiment analysis using Text Blob or the integrated Hugging Face module

Business Implementation

Power BI

- o Presentation of the most meaningful business insights
- o Update of the current market state by analysing competitors

Scoping

What business challenges is Bokan 39 encountering and how could they be overcome ?

Roadmap

2 weeks

Scoping

- Defining the business objectives and the methodology to achieve them
- Identifying target market for COVID and post-COVID periods
- Establishing the most important KPIs to focus on during the lockdown to ensure business continuity
- Conceptualizing 'Bokan Klan' to stand out from the crowd

6 weeks

Data Analytics

- Identifying business drivers
- Collecting and preprocessing data from Tripadvisor
- Extracting and hierarchizing the most relevant topics in the Londonian restaurant scene
- Understanding the overall sentiment of customers
- Monitoring the competition's performance

2 weeks

Delivery

- Delivering data product
- Selecting KPIs to prioritize and track based on data insights
- Formulating recommendations to revamp, rebrand and adapt the menu to new target market
- Selecting dishes based on customers' preferences
- 'Launching 'Bokan Klan' website

Objectives

Ensuring the continuity of business operations during the lockdown with a new website concept

- Build a new website concept targeting a younger clientele **'Bokan Klan'**
- Create a new and simplified menu for delivery
- Sell pre-bottled bundles of cocktails to bring the 'bar' experience to home

Understanding customers and Building an online community

- Launch an e-shop within the Bokan Klan to sell kitchen supplies and apparel to promote the 'Bokan Klan'
- Create a music playlist to share with customers that reflects the Bokan atmosphere

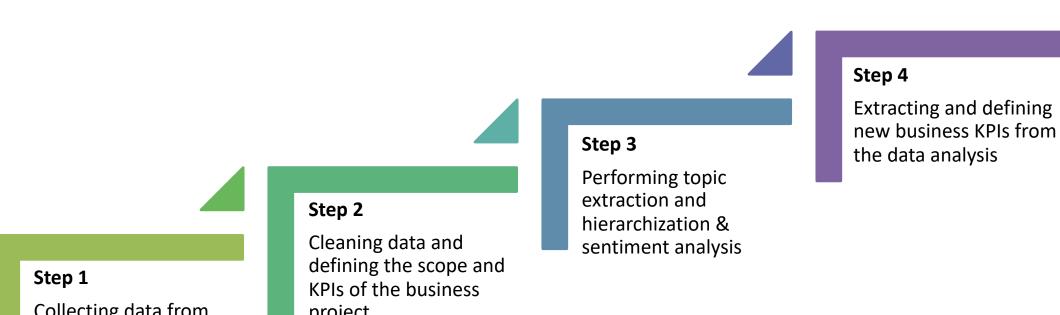**Preparing for future opening to attract a larger scale of customers**

- Perform sentiment analysis to understand customers' tastes and preferences
- Perform topic extraction and hierarchization from Tripadvisor data to adapt to younger customers' tastes
- Generate insights regarding customers' ideals of the 'customer experience'

Methodology

COLLECTING AND PERFORMING DATA ANALYTICS ON TRIPADVISOR DATA TO GENERATE MEANINGFUL INSIGHTS ABOUT THE RESTAURANT INDUSTRY IN LONDON

Step 1

Collecting data from Tripadvisor and performing as-is and to-be analysis

Step 2

Cleaning data and defining the scope and KPIs of the business project

Step 3

Performing topic extraction and hierarchization & sentiment analysis

Step 4

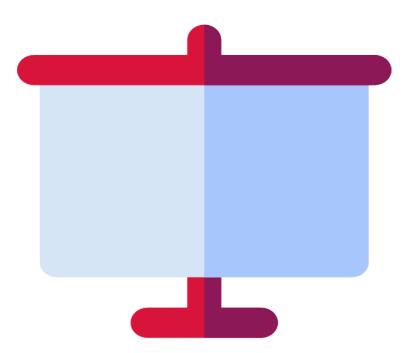Extracting and defining new business KPIs from the data analysis

KPIs

Which KPIs should Bokan focus on to effectively achieve its new business goals?

Current KPIs to focus on (+ metrics to track)

Social media & marketing

- Build online community around the Bokan Klan website – *repeated visitor rate (%) by allowing users to create accounts*
- Develop social media presence – *3 posts/week, Instagram stories of the cooks as well as cooking and cocktail making masterclasses*
- Track 'Bokan Klan' website traffic metrics - *clickthrough rate (%) for menu and e-shop*
- Track social media and customer engagement metrics – *likes, comments, new followers, shares and engagement rate (%)*
- Encourage engagement through competitions involving sharing dishes/cocktail making with *#bokanklan hashtags..*

Customer experience

- Operation 'bringing the restaurant & bar experience to customers' homes' – *e-shop selling pre-bottled sets of cocktails for home soirées*
- Focus on speed, safety and hygiene to boost customer satisfaction by tracking metrics – *on-time delivery, number of sick employees, supply chain issues*

Kitchen Management

- Revamp and simplify menu aligned with new goals and prioritizing faster service and less costly dishes – *revenue by dish (£), evaluating competition menus with topic modeling*
- Maintain low cost of goods sold by prioritizing simpler and quicker-to-make dishes requiring cheaper ingredients – *COGS (£)*

Staff Management

- Track staff compliance to hygiene and safety restrictions – *schedule tracking staff health, regular testing of the staff, supplying individual sets of hand sanitizers and masks for the staff*
- Track and support staff morale and engagement – *therapy sessions, teambuilding activities*

Profitability & Administration Management

- Track returning and new customers – *retention rate (%)*
- Keep track of cash on hand – *Cash Flow (£)*
- Launch promotions/bundles to boost sales through *BokanKlan Instagram* page and *newsletters*