



# Pedagogical Innovation

**Pedagogical Innovation for VET Schools. Push and Pull sales techniques using AI technologies in gastronomy in order to gain more customers and improve the quality of services**

# Disclaimer



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the European Union**

**GastroNet - Vocational Education and Training**

Project number 2023-2-PL01-KA220-VET-000171447

# About Project

## GastroNet - Vocational Education and Training



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An additional set of tools for vocational education and training in gastronomy to improve the professional situation of students on the labor market

Throughout our work, we want to show how to solve social problems. We want to contribute to increase the level of education of various social groups in countries where we are going to run our work and to have an influence on the integration processes between nations. We are certain that this is education which gives a chance to grow and makes the social differences smaller.

Intercultural dialogue is possible thanks to education. Thus, our work aims also at education and training, also in the aspect of international cooperation. We also want to propagate the knowledge about the people connected with the ideas of our foundation.

Our main focus are the groups at the risk of social exclusion with regards to labour marker such as disabled, NEETs, lowskilled adults and domestic violence victims. Our experts have expertise in higher education and adult education.

Acquiring new knowledge related to new technologies and sales techniques in order to better prepare the training plan • development of pedagogical innovation formulation of a training plan and outline for students of gastronomic schools.



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## **Push and Pull sales strategies when integrated with AI represent mechanisms for attracting and retaining customers.**

Push strategies focus on delivering proactive offers to the customer, often before the customer explicitly expresses a need. Pull strategies, on the other hand, are designed to attract customers by sparking curiosity or interest, prompting them to initiate interaction. The synergy of these two approaches leads to higher customer engagement, improved service quality, and increased business revenue.

The present pedagogical innovation is designed for Vocational Education and Training (VET) schools in gastronomy, drawing on best practices EU countries with rich culinary traditions, and active integration of digital marketing tools in restaurant business models. The core aim is to equip VET students with the digital, analytical, and marketing competencies required to implement Push and Pull strategies supported by AI.

Push strategies (promoting products to the consumer) using AI enable personalized offers based on behavioral analytics, while Pull strategies (attracting customers through demand or interest).

Combining these approaches contributes to increased customer loyalty, higher engagement, and improved service quality.

AI technologies make it possible to send personalized push notifications based on the analysis of previous purchases, customer preferences, as well as data on weather conditions, time of day, or even the visitor's emotional state. For example, Starbucks uses its own mobile app with AI algorithms that offer customers their favorite drinks at the exact moment when the likelihood of purchase is highest. In this case, the push model works by encouraging a purchase through a proactive offer.

The goal of the "Smart Gastronomy" pedagogical innovation is to create a learning environment where digital transformation skills in gastronomy can be practiced.

The "Smart Gastronomy" learning environment involves the practical use of AI for personalizing customer experience.

### **Main components of the innovation:**

1. AI analytics for customer behavior
  - studying examples from McDonald's and Starbucks, which use AI to personalize orders
  - case task: analyzing order data and creating personalized recommendations
2. Designing marketing strategies (Push & Pull)
  - developing promotion strategies based on cases and AI systematization

### **Didactic Model of using AI tools for VET Schools**

The integration of AI into sales strategies, specifically push and pull marketing, requires an pedagogical model that not only imparts technical skills but also fosters creativity, and customer-oriented mindsets.

The didactic model of using AI tools in gastronomy education aligns with the European Qualifications Framework (EQF) and the European Digital Competence Framework for Citizens (DigComp), ensuring relevance across Europe.

The key goals include ensuring personalized skill development, supporting adaptive learning pathways, and providing real-time feedback during practical training. Another important goal is to strengthen the link between school curricula and labor market demands, preparing learners for Industry 4.0 and the digital society.

### **For the "Smart Gastronomy" pedagogical innovation, core competencies are:**

- 1) Students must acquire the ability to understand and use applications effectively. This includes navigating AI-driven customer data platforms;
- 2) Analyzing customer behavior patterns, interpreting purchase data, and generating actionable marketing insights form the backbone of push strategies. This requires skills in statistics, critical evaluation of data sources, and decision-making based on analytics;
- 3) Understanding customer needs, managing interactions, and designing marketing campaigns that integrate push and pull techniques are essential. These skills bridge the gap between technology and human-centered service.

The “**Smart Gastronomy**” learning environment is structured as a combination of theoretical input, case-based learning, and hands-on practice with AI tools. Students explore real examples of global companies, conduct analytical tasks, and design their own solutions for gastronomy-related challenges. AI is used not only as a technical tool but also as a didactic element that fosters creativity, adaptability, and customer-oriented thinking.

The didactic mechanism of using artificial intelligence in vocational education (in particular in VET schools) can be described as a system of interaction between the teacher, the student, learning tasks, and AI tools. Its essence lies in the fact that AI does not replace the teacher but creates conditions for personalized and practice-oriented learning.

**The didactic scheme of integrating artificial intelligence tools into learning in gastronomy VET schools can be represented as follows:**

- 1) Student's prior knowledge and experience
- 2) Tasks (practical and educational)
- 3) Use of AI tools
- 4) Feedback and reflection
- 5) Formation of professional and soft skills.

**Example:** A student receives an assignment to design a menu for a healthy food restaurant. They enter data into an AI system (e.g., number of calories, budget, list of ingredients), receive recommendations and dish options, and then adjust them according to real conditions and specific requirements.

## Detailed description of the stages of AI tool integration into learning in gastronomy

### VET schools:

#### 1. Student's prior knowledge and experience

At this stage, prior preparation is considered: basic knowledge of the discipline, practical experience, interests, and level of digital literacy.

Didactic mechanism: knowledge actualization (short questions, tests, discussions).

#### 2. Tasks (practical and educational)

Assignments are formulated that require the integration of knowledge and skills.

Didactic mechanism: problem-based learning, case study method.

#### 3. Use of AI tools

The student applies digital tools (e.g., ChatGPT, Excel with integrated Copilot). This enables them to obtain solution options and recommendations.

Didactic mechanism: learning by doing.

#### 4. Feedback and reflection

The teacher and the student analyze the result: whether it meets the assignment requirements.

Didactic mechanism: self-assessment, peer assessment, reflective journals, discussions.

#### 5. Formation of professional and soft skills

Through this model, the student acquires knowledge, develops professional skills (analytics, project management, economic justification), and soft skills (critical thinking, communication, creativity, teamwork).

### Didactic mechanisms for integrating AI:

#### 1. Modeling production situations (problem-based learning)

AI creates realistic scenarios (e.g., "a restaurant has received an order for a banquet for 50 people with a vegetarian menu") in which students must make decisions. This trains professional competences without the risk of material losses.

#### 2. Collaborative learning

Students work in groups on a task, while AI acts as a "chef-consultant" offering possible solutions. For example, the group develops a dish for a competition, and AI generates various presentation options and calculates costs.

### 3. Reflective practice

After a practical session, the student can “communicate” with AI about their decisions: why they chose a particular cooking method, how the process could be optimized, what modern trends could have been considered.

### Skills that can be developed with AI:

#### 1. Professional competences

- Menu creation (AI analyzes nutritional value and suggests alternatives)
- Cost management (AI calculates dish costs, helps reduce food waste)

#### 2. Creative skills

- Developing new gastronomic concepts/ideas (AI generates ideas for fusion cuisine, molecular gastronomy)
- Visual dish design (AI image generators help imagine the presentation)

#### 3. Soft skills

- Teamwork through group projects with an AI assistant
- Critical thinking, students must evaluate the relevance of AI recommendations instead of copying them blindly
- Communication, simulating customer service through AI chatbots

#### 4. Meta-skills

- Adaptability – ability to quickly create new dishes in response to changing customer demands
- Lifelong learning – using AI as a continuous self-learning tool
- Intercultural competence – AI helps explore culinary traditions of different countries.

# Main Components of the Innovation

## 1. AI Analytics for Customer Behavior

- Students study practical examples (E.g., McDonald's, Starbucks), which widely use AI technologies to personalize orders, predict customer preferences, and optimize menu offers;
- Analytical case tasks are designed to simulate business situations, where students receive sets of order data. Using AI-driven tools, they identify customer behavior patterns, generate insights, and propose personalized recommendations.

Knowledge focus: Basics of AI-powered analytics, personalization of services, and consumer behavior modeling.

Practical focus: Students explore case examples from companies, which use AI to recommend personalized menu options, predict purchasing habits, and optimize order systems.

Learning task: Students receive anonymized order data and, with AI tools, identify consumption patterns and create personalized recommendations.

Competence outcome: Ability to apply AI analytics to solve business problems and propose customer-centered solutions.

This component strengthens students' ability to apply data-driven decision-making in gastronomy and equips them with the skills necessary to use AI analytics platforms in practice.

## 2. Designing Marketing Strategies (Push & Pull)

- Students learn how AI supports both push and pull marketing strategies in gastronomy. Push strategies are demonstrated through AI-driven promotions, loyalty programs, and targeted advertisements, while pull strategies are illustrated through customer feedback analysis, personalized offers, and demand forecasting;
- Case-based exercises encourage students to design promotion strategies for a gastronomy business, integrating AI-supported data systematization.

**Knowledge focus:** Principles of push and pull marketing, digital promotion channels, and AI-supported market systematization.

**Practical focus:** Students analyze how AI supports push strategies (targeted ads, loyalty programs, push notifications) and pull strategies (customer feedback analysis, demand prediction, personalized offers).

**Learning task:** Students design AI-enhanced promotion strategies for a gastronomy business, integrating both push and pull mechanisms.

**Competence outcome:** Capacity to combine creativity with data-driven insights in marketing design.

The focus is placed on creativity and strategic thinking, ensuring that students can adapt digital marketing practices to real customer needs.

### **Expected results:**

The didactic model ensures that VET students in gastronomy gain technical knowledge about AI tools and acquire practical competencies in applying them to enhance customer experience. Students learn to analyze behavioral data, generate personalized service solutions, and design effective marketing strategies.

At the same time, the model develops transversal skills such as problem-solving, critical thinking, and adaptability to digital transformation processes. As a result, graduates are better prepared for modern labor market demands and capable of innovating in the field of gastronomy.

### **Methods**

The didactic methods applied in the model are based on practice orientation, problem-solving, and case-based learning:

- Case-based learning. Students work on business cases, analyzing how AI is applied in global gastronomy networks;
- Problem-based learning. Learners are confronted with business challenges, such as declining customer loyalty or underperforming promotions, and solve them with AI-supported strategies;

- Simulation and role-play. AI tools simulate customer interactions, allowing students to test their recommendations in a safe learning environment;
- Collaborative projects. Students work in groups to design marketing strategies, reflecting real-world teamwork in gastronomy businesses.

## **Results**

The implementation of the didactic model provides measurable learning outcomes:

### **For students:**

- Development of digital transformation skills in gastronomy
- Ability to analyze customer behavior using AI analytics
- Competence in designing AI-based personalized services
- Skills in creating push & pull marketing strategies supported by AI
- Strengthened transversal skills: problem-solving, creativity, adaptability, teamwork

### **For teachers:**

- Access to innovative teaching practices with AI integration
- Tools for motivating students through industry cases
- Opportunities to align teaching with labor market requirements

### **For VET schools and industry:**

- Closer connection between education and industry practices
- Training graduates who are prepared for modern digital gastronomy markets
- Contribution to the competitiveness of vocational education in the digital era.

**Table 1. Didactic Scheme**

Element	Description	Practical Application	Outcome
<b>Goal</b>	Building digital transformation skills in gastronomy through AI	“Smart Gastronomy” learning environment	Students capable of applying AI tools in gastronomy
<b>Component 1:</b> AI Analytics for Customer Behavior	Understanding customer behavior via AI	Case examples: McDonald’s, Starbucks and others; order data	Personalized recommendations
<b>Component 2:</b> Designing Marketing Strategies (Push & Pull)	Designing push & pull strategies with AI	Promotion design, loyalty programs, feedback analysis	Creative and strategic marketing skills
<b>Methods</b>	Case-based, problem-based, collaborative, blended learning	Team projects, simulations, role play	Applied, practice-oriented knowledge
<b>Results</b>	Skills, competencies, innovation capacity	Industry-aligned graduates	Improved employability, innovation in gastronomy

The didactic model ensures compliance with:

-EQF Levels 4-5. Corresponding to upper secondary and post-secondary VET qualifications, where students demonstrate autonomy and responsibility in professional tasks;

-DigComp 2.2 Framework. Emphasizing information and data literacy, communication, digital content creation, safety, and problem-solving competencies in digital contexts.

This alignment facilitates student mobility across EU countries and enhances their employability in a digitalized hospitality sector.

## Structure of the Learning Environment

### The "Smart Gastronomy" learning environment integrates:

- AI tools (for AI analytics practice)
- Collaborative spaces (to encourage teamwork on marketing campaigns and problem-solving exercises)
- Simulated modules (enabling experiential learning of push and pull techniques).

### Teacher Competencies

Teachers facilitating this innovation should possess:

- Proficiency in AI technologies and their application in marketing
- Skills in fostering learner autonomy and critical digital literacy
- Competence in integrating theory and practice through active, student-centered methods
- Awareness of ethical issues in AI data handling and digital communication.

### Component 1. AI analytics for customer behavior

Customer behavior analysis with artificial intelligence is a key marketing and business management tool of the 2020s. It allows companies to gain a deeper understanding of how consumers interact with products, services, and brands, and to make managerial decisions based on this knowledge.

The use of artificial intelligence for identifying consumer behavior is based on the following methods:

1. Clustering
2. Association analysis
3. Sentiment analysis
4. Funnel analysis
5. Cohort analysis
6. Customer lifecycle analysis
7. Anomaly detection

One of the primary methods is customer clustering, which, using machine learning algorithms such as k-means, DBSCAN, or Hierarchical Clustering (implemented in Python libraries like scikit-learn, H2O.ai, or RapidMiner), groups consumers by similar characteristics and behavioral patterns. This enables the creation of personalized offers for each group.

Another important method is association analysis, which identifies relationships between purchases, for example, which products are most often bought together. Algorithms such as Apriori or FP-Growth (available in MLxtend, Orange Data Mining, and R) are commonly used. In e-commerce, recommendation systems are widely applied, built on collaborative filtering (Surprise, LightFM, TensorFlow Recommenders) or content-based models to suggest products or services most relevant to user interests.

Sentiment analysis is based on natural language processing and allows for the automatic detection of the emotional tone of customer reviews, comments, or messages. This is implemented using tools such as NLTK, spaCy, Hugging Face Transformers, or Google Cloud Natural Language API.

Predictive analytics applies regression models, decision trees, and neural networks to forecast future customer actions, such as the likelihood of repeat purchases or churn risk. Tools include XGBoost, CatBoost, PyCaret, as well as services like AWS SageMaker and Azure Machine Learning.

Funnel analysis helps identify at which stage users most often abandon the purchasing process. Tools such as Google Analytics 4, Mixpanel, or Heap Analytics are particularly useful.

Cohort analysis tracks the behavior of customer groups over time and can be implemented in Tableau, Power BI, or Looker. Customer lifetime value analysis evaluates the long-term value of a customer to a business, using survival models (e.g., lifelines in Python) or integrated tools in Salesforce and HubSpot.

AI methods also include anomaly detection, which identifies unusual behavior that may indicate fraud or technical issues. Techniques include Isolation Forest, One-Class SVM, PyOD, or IBM Watson Machine Learning.

Visual analytics with AI transforms large volumes of customer data into graphs and heatmaps (using Plotly, Matplotlib, D3.js, Qlik). AI also enables omnichannel analytics, combining data from multiple sources into a unified customer profile with tools such as Segment, Treasure Data, or Adobe Experience Platform, integrating information from websites, mobile apps, social media, and offline points of sale.

A separate area is real-time behavior analytics, which enables instant reactions to user actions, for example, sending a special offer if a customer spends a long time viewing a product. This can be implemented with Apache Kafka, Google BigQuery, and AWS Kinesis. The use of deep learning opens new possibilities in predicting complex behavioral patterns, particularly with LSTM, GRU, or Transformers in TensorFlow and PyTorch.

AI also supports A/B testing with automated optimization, using tools such as Optimizely, Google Optimize, or VWO, where algorithms automatically select the most effective content variations.

Thus, AI analytics methods for customer behavior, combined with specific tools, allow companies not only to describe past consumer activity but also to accurately predict future actions. This creates a foundation for personalized service, increased loyalty, and revenue growth. Effective implementation of these methods requires not only high-quality data but also well-designed strategies for integrating AI into business processes.

**Table 2. AI analytics for customer behavior – description and examples of tools**

Method	Description	Example AI Tools
Customer Segmentation Clustering	Grouping customers by similar characteristics and behavioral patterns to enable personalized offers.	scikit-learn (k-means, DBSCAN), H2O.ai, RapidMiner
Association Rule Mining	Identifying patterns of joint purchases and relationships between products.	MLxtend (Apriori), Orange Data Mining, R
Recommendation Systems	Personalized product or service suggestions based on user behavior.	Surprise, LightFM, TensorFlow Recommenders
Sentiment Analysis	Automatic detection of the emotional tone of reviews and comments.	NLTK, spaCy, Hugging Face Transformers, Google Cloud Natural Language API
Predictive Analytics	Forecasting customer future actions: repeat purchases, churn, etc.	XGBoost, CatBoost, PyCaret, AWS SageMaker, Azure ML
Funnel Analysis	Identifying stages at which users abandon the purchasing process.	Google Analytics 4, Mixpanel, Heap Analytics
Cohort Analysis	Analyzing the behavior of customer groups who started using a product in the same period.	Tableau, Power BI, Looker
Customer Lifetime Value Analysis	Calculating the long-term value of a customer for the business.	lifelines (Python), Salesforce, HubSpot
Anomaly Detection	Identifying unusual behavior that may indicate fraud or technical issues.	Isolation Forest, One-Class SVM, PyOD, IBM Watson ML

Method	Description	Example AI Tools
Visual Analytics	Transforming large volumes of data into visual graphs and dashboards.	Plotly, Matplotlib, D3.js, Qlik
Omnichannel Analytics	Combining data from different channels into a unified customer profile.	Segment, Treasure Data, Adobe Experience Platform
Real-time Behavior Analytics	Instant reactions to user actions (e.g., special offers).	Apache Kafka, Google BigQuery, AWS Kinesis
Deep Learning for Behavior Prediction	Predicting complex behavioral patterns using neural networks.	TensorFlow, PyTorch, Keras
AI-Driven A/B Testing	Automatic selection of the most effective content.	Optimizely, Google Optimize

# GastroNet

## EDUCATION AND TRAINING

## Component 2. Overview of Push and Pull Sales Strategies in Gastronomy

Push and Pull sales strategies, when integrated with AI, represent effective mechanisms for attracting and retaining customers. Push strategies focus on delivering proactive offers to customers, often before they explicitly express a need. AI enables Push strategies to provide highly personalized recommendations based on behavioral analytics and past interactions. For example, AI-driven email platforms like Mailchimp or HubSpot can automatically send targeted offers to specific customer segments.

Push campaigns can include app notifications, SMS alerts, or personalized advertisements. AI-powered CRM systems, such as Salesforce or Zoho, help track customer interactions and optimize offer timing. In gastronomy, Push strategies can suggest menu items, promotions, or reservation reminders directly to customers based on their dining history. AI can predict customer preferences and suggest complementary dishes or beverages, increasing average order value. Conversely, Pull strategies aim to attract customers by generating curiosity or interest, prompting them to initiate interaction. Social media content, blogs, recipes, and video tutorials are key tools for Pull strategies. AI tools like Canva's AI design assistant or Lumen5 can help generate visually engaging and personalized content for social media campaigns.

AI analytics platforms, such as Google Analytics or Sprout Social, monitor audience engagement and recommend content adjustments. Pull strategies focus on creating a strong brand identity and emotional connection with customers. Interactive campaigns, like live cooking sessions or virtual kitchen tours, can be optimized using AI to analyze engagement patterns. AI also predicts trending topics, hashtags, or recipe formats that resonate with target audiences.

Combining Push and Pull strategies creates a balanced approach that maximizes customer engagement, loyalty, and revenue. In VET schools, students learn to design AI-supported campaigns that blend creativity with data-driven insights.

Case studies from EU countries with rich culinary traditions demonstrate practical implementation. Push strategies benefit from AI personalization, while Pull strategies are enhanced through AI-assisted content targeting. Chatbots like ChatGPT or Drift can be used in Pull campaigns to provide instant customer interaction and gather feedback. AI-powered recommendation engines, such as those in online reservation systems, support Push strategies by suggesting relevant offers. Social proof, including reviews and testimonials, can be analyzed using AI sentiment analysis tools to guide both Push and Pull campaigns. Seasonal promotions, loyalty rewards, and limited-time offers exemplify AI-enhanced Push strategies. Blogs, video tutorials, interactive menus, and virtual tastings exemplify AI-supported Pull strategies.

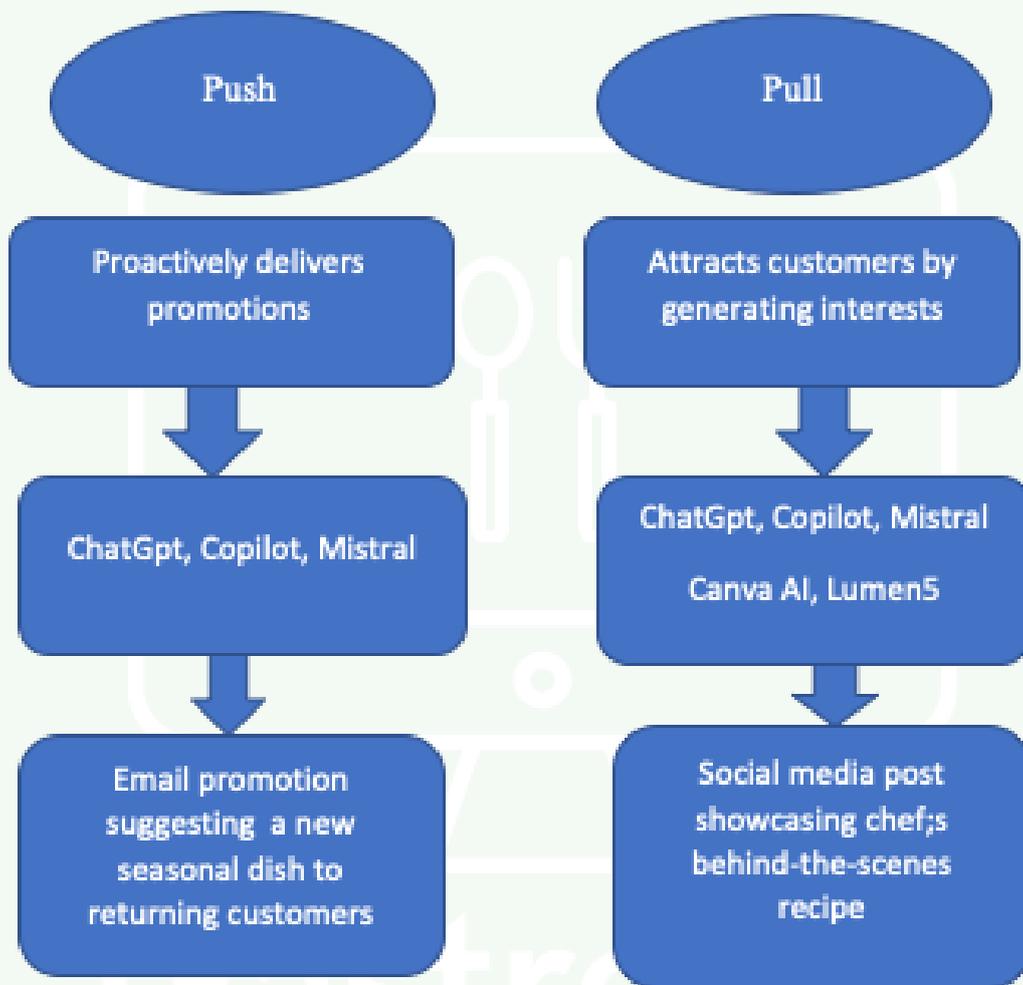
Continuous monitoring with AI allows real-time adjustments for maximum impact. Data-driven insights help students understand which strategies generate the highest engagement. Integrating Push and Pull strategies with AI equips students with digital, analytical, and marketing competencies needed in modern gastronomy. These approaches foster sustainable customer relationships, encourage word-of-mouth promotion, and enhance the overall dining experience. Ultimately, mastering AI-supported Push and Pull strategies empowers students to increase business performance while providing personalized and engaging customer experiences.

**Table 3. Push vs Pull strategies with AI для VET gastronomy**

Strategy	AI Tool / Platform	Mechanism	Example in Gastronomy	Expected Result
Push	Mailchimp, HubSpot	Sends personalized offers based on behavior and past interactions	Email promotion suggesting a new seasonal dish to returning customers	Increased order rate and immediate sales

Strategy	AI Tool / Platform	Mechanism	Example in Gastronomy	Expected Result
Push	Salesforce, Zoho CRM	Tracks customer interactions to optimize timing of offers	App notifications for table reservations during peak hours	Higher reservation rate and customer retention
Push	Recommendation engines (OpenTable AI, Toast)	Suggests complementary menu items	AI recommends wine pairing or dessert based on main course choice	Increased average order value
Push	SMS / Mobile app alerts	Proactively delivers promotions	SMS alert about limited-time lunch specials	Quick response and increased visits
Push	Loyalty program AI (Fivestars, Thanx)	Analyzes customer purchase history to create targeted rewards	Points bonus for ordering favorite dish	Higher repeat visits and loyalty
Pull	Canva AI, Lumen5	Generates engaging, shareable content	Social media post showcasing chef's behind-the-scenes recipe	Attracts new followers and potential customers
Pull	Google Analytics, Sprout Social	Monitors engagement and recommends content adjustments	AI suggests trending hashtags or optimal posting time	Higher engagement and organic reach

Strategy	AI Tool / Platform	Mechanism	Example in Gastronomy	Expected Result
Pull	Chatbots (ChatGPT, Drift)	Provides interactive communication and gathers feedback	Virtual assistant answers menu questions or takes reservations	Improved customer satisfaction and engagement
Pull	AI sentiment analysis (MonkeyLearn, Lexalytics)	Analyzes reviews and social media sentiment	Determines which dishes generate the most positive feedback	Guides content and promotion strategy
Pull	AI trend prediction (Trendalytics, Crayon)	Predicts popular content and seasonal trends	Suggests viral recipe videos, food challenges, or interactive cooking	Attracts customers through curiosity and demand
Pull	Virtual/AR experience tools (Matterport, ARKit)	Creates immersive experiences	Virtual restaurant tour or AR menu preview	Increased engagement and stronger brand connection
Pull	Influencer analytics AI (HypeAuditor, Upfluence)	Identifies high-impact collaborators	AI selects food bloggers with highest engagement for campaign	Broader organic reach and increased interest



**Figure 1. Using Push and Pull Strategies with AI in Gastronomy**

Push strategies involve initiating contact with the customer to prompt an action, such as making a purchase, based on predictive issues. AI technologies enable advanced personalization by analyzing:

- Purchase history
- Customer preferences
- Behavioral patterns
- External factors (weather, time of day, events) and oth.

#### Examples

Taco Bell. Voice AI in Drive-Thru Operations (Push Strategy)

Taco Bell has implemented voice AI technology in over 500 drive-thru locations across the U.S. to streamline the ordering process and improve service efficiency.

The system utilizes natural language processing to understand customer orders, enabling faster and more accurate service.

However, the rollout faced challenges, including customer complaints about glitches and delays, as well as instances of prank orders. In response, Taco Bell is reassessing the deployment of AI, considering factors such as peak hours and customer demographics to optimize its use. Despite these challenges, the company remains committed to refining its AI strategy to enhance the customer experience .

<https://www.wsj.com/articles/taco-bell-rethinks-future-of-voice-ai-at-the-drive-through-72990b5a?utm>

Pizzeria Perfection. AI-Driven Upselling with Loman.ai (Push Strategy)

Pizzeria Perfection, a mid-sized restaurant, integrated Loman.ai's AI-powered upselling system to enhance its customer service and increase sales. The AI assistant analyzes customer preferences and order history to suggest complementary items, such as appetizers, beverages, or desserts, during the ordering process. Within the first month of implementation, the restaurant observed a 20% increase in average order value for phone orders. This personalized approach not only boosted revenue but also improved customer satisfaction by offering tailored recommendations .

<https://loman.ai/blog/using-ai-to-enhance-upselling-strategies-in-restaurants?utm>

Dine Brands. AI Personalization at Applebee's and IHOP (Pull Strategy)

Dine Brands, the parent company of Applebee's and IHOP, has adopted AI-driven personalization strategies to enhance the dining experience and customer engagement. The company implemented a generative AI-based personalization engine that provides customized food recommendations based on customer behavior and ordering history. This system aims to increase customer loyalty and facilitate upselling, especially as consumers become more price-sensitive. Additionally, Dine Brands is testing AI cameras to detect when tables need clearing and an AI application to assist managers with staffing and daily operations .

<https://www.wsj.com/articles/applebees-and-ihop-plan-to-introduce-ai-in-restaurants-61770ca5?utm>

### McDonald's. AI Integration with Google Cloud (Push Strategy)

McDonald's has partnered with Google Cloud to integrate AI solutions across its global network of restaurants. The collaboration focuses on utilizing generative AI and edge computing to enhance customer service platforms, including mobile apps and self-service kiosks. By installing edge servers managed by Google Cloud, McDonald's aims to provide faster, low-latency analytics and personalized experiences for customers. This AI-driven approach is designed to improve order accuracy, optimize operations, and offer tailored promotions, thereby increasing customer satisfaction and driving sales.

<https://corporate.mcdonalds.com/corpmcd/our-stories/article/mcd-google-cloud-announce-partnership.html?utm>

### McDonald's UK & Ireland: Personalized Storytelling with Microsoft Azure (Pull Strategy)

In the UK and Ireland, McDonald's partnered with Microsoft Azure to create personalized storytelling experiences for families dining in their restaurants. Using data such as customer names and locations, the AI system generated unique narratives, enhancing the dining experience and fostering emotional connections with the brand. This initiative reflects McDonald's commitment to offering innovative and personalized experiences to its customers in these regions.

<https://www.alter-solutions.com/case-study-mcdonalds-artificial-intelligence?utm>

### KFC Germany. Personalized Advertising with Clinch (Push Strategy)

In Germany, KFC collaborated with Clinch to deploy a personalized advertising solution that dynamically adjusted content based on individual dietary preferences. This approach allowed KFC to promote its new plant-based offerings to vegetarian customers while continuing to cater to traditional meat-eaters. The AI-driven platform enabled targeted messaging, leading to increased engagement and awareness among diverse customer segments.

<https://www.clinch.co/case-studies/kfc?utm>

## Just Eat Takeaway. AI-Driven Personalization for Restaurant Partners (Pull Strategy)

Just Eat Takeaway, Europe's largest food delivery platform, utilizes AI to deliver hyper-personalized menu recommendations, dynamic pricing, and demand forecasting for its restaurant partners. This AI-powered approach has driven a 14% increase in average order value and a 13% boost in delivery efficiency, benefiting both customers and restaurant partners.

<https://dataforest.ai/blog/ai-in-food-and-beverage-personalized-dining-experiences?>

The real-world examples illustrate the transformative potential of artificial intelligence when applied to Push and Pull strategies in the gastronomy sector. Taco Bell's implementation of voice AI in over 500 drive-thru locations in the U.S. represents a Push strategy, proactively facilitating faster order processing and improving service efficiency. While the rollout faced challenges such as technical glitches and prank orders, the company is optimizing AI deployment by considering peak hours and customer behavior patterns. Similarly, Pizzeria Perfection utilized Loman.ai to implement AI-driven upselling, another Push strategy, where complementary menu suggestions increased the average order value by 20% and enhanced customer satisfaction through personalized recommendations. Dine Brands, the parent company of Applebee's and IHOP, demonstrates the effectiveness of Pull strategies by using a generative AI engine to provide personalized food recommendations based on past behavior, fostering engagement and encouraging repeat visits. McDonald's global partnership with Google Cloud illustrates a hybrid Push approach, integrating AI into mobile apps, self-service kiosks, and operational processes to improve order accuracy, streamline operations, and offer targeted promotions.

In the UK and Ireland, McDonald's leverages Microsoft Azure to create Pull experiences, generating personalized storytelling for families that strengthens emotional connections with the brand and enhances the dining experience. KFC Germany employs AI-powered advertising with Clinch as a Push strategy, delivering dynamic content tailored to dietary preferences, effectively promoting plant-based options while retaining traditional customers.

Just Eat Takeaway, Europe's largest food delivery platform, applies Pull strategies through hyper-personalized menu recommendations, dynamic pricing, and demand forecasting, resulting in a 14% increase in average order value and a 13% improvement in delivery efficiency. Collectively, these cases reveal how Push strategies use AI to proactively stimulate customer purchases, while Pull strategies attract customers by generating curiosity and personalized engagement.

The synergy between these approaches enables restaurants to both drive immediate sales and build long-term loyalty. AI's ability to analyze customer behavior, preferences, and external factors such as time of day or special events ensures more precise targeting and effective marketing campaigns. By tailoring offers and interactions, AI fosters a personalized experience that improves satisfaction and repeat visits. Moreover, the integration of AI in both front-of-house and back-of-house operations enhances efficiency, reduces errors, and supports data-driven decision-making. European examples, such as KFC Germany and Just Eat Takeaway, show that AI strategies are not limited to North America but are highly adaptable to diverse markets and culinary cultures. Overall, these cases confirm that AI-driven Push and Pull strategies provide a competitive advantage in modern gastronomy, increasing revenue, enhancing operational performance, and strengthening customer relationships.

## Exercises and Practical Assignments

**Example 1. Prepare three menu options (breakfast, lunch, dinner)** using the following ingredients: chicken, broccoli, carrots, tomatoes, rice, quinoa, avocado, lemon, and yogurt for a hotel restaurant with 50 seats. The menu should be healthy and balanced, based on the basic response from ChatGPT. Provide 3-5 suggestions for improving the menu generated by ChatGPT.

## Answer from ChatGPT:

### “Breakfast

- Quinoa & Yogurt Bowl – quinoa cooked in light lemon water, topped with Greek-style yogurt, diced avocado, cherry tomatoes, and a drizzle of lemon juice.
  - Carrot & Broccoli Muffins – savory muffins with finely grated carrots and steamed broccoli florets, served warm.
  - Fresh Lemon Water or Herbal Tea – served with a slice of lemon for a refreshing start.
- Balanced for protein (quinoa, yogurt), fiber (vegetables), and healthy fats (avocado).

### Lunch

- Grilled Chicken with Quinoa & Steamed Vegetables – grilled chicken breast served on a bed of quinoa with steamed broccoli and carrots, garnished with fresh lemon zest.
  - Tomato & Avocado Salad – fresh diced tomatoes and avocado with a light lemon-yogurt dressing.
  - Steamed Rice Side – light portion for those who prefer rice instead of quinoa.
  - Fruit-Infused Water – lemon and cucumber infusion.
- Provides lean protein (chicken), complex carbs (quinoa, rice), antioxidants (tomatoes, carrots), and healthy fats (avocado).

### Dinner

- Oven-Baked Lemon Chicken – marinated in lemon juice, garlic, and herbs, baked until golden.
  - Broccoli & Carrot Puree Soup – light cream-style soup blended with natural yogurt for smoothness.
  - Rice Pilaf with Tomatoes & Herbs – fluffy rice cooked with fresh tomatoes and herbs for a Mediterranean touch.
  - Avocado-Yogurt Dip with Vegetable Sticks – creamy dip served with carrot and broccoli sticks.
  - Warm Herbal Infusion – lemon and mint.
- Light and easy-to-digest dinner, balancing protein, vegetables, and whole grains”.

**Example of student's answer:** The menu is healthy and well-balanced, providing protein, complex carbohydrates, vegetables, and healthy fats. However, adding a small dessert made with yogurt, fruit, or lemon could make the meal more enjoyable and satisfying. Such a dessert maintains the nutritional balance because it uses natural, low-calorie ingredients, avoiding excessive sugar or fat. It also adds flavor variety, appealing textures, and bright colors, which make the meal more visually attractive. Furthermore, including a light dessert enhances the overall guest experience in a hotel restaurant, giving a sense of completeness to the meal and meeting the expectations of both health-conscious guests and those who enjoy a small treat”.

Revised menu with the light yogurt, fruit, or lemon dessert:

#### 1) Breakfast

- Quinoa & Yogurt Bowl (quinoa cooked in light lemon water, topped with Greek-style yogurt, diced avocado, cherry tomatoes, and a drizzle of lemon juice);
- Carrot & Broccoli Muffins (savory muffins with finely grated carrots and steamed broccoli florets, served warm);
- Fresh Lemon Water or Herbal Tea (served with a slice of lemon);
- Light Yogurt Parfait Dessert (layered yogurt with fresh fruit and a hint of lemon zest).

#### 2) Lunch

- Grilled Chicken with Quinoa & Steamed Vegetables – grilled chicken breast served on a bed of quinoa with steamed broccoli and carrots, garnished with fresh lemon zest;
- Tomato & Avocado Salad (fresh diced tomatoes and avocado with a light lemon-yogurt dressing);
- Steamed Rice Side (light portion for those who prefer rice instead of quinoa);
- Fruit-Infused Water (lemon and cucumber infusion);
- Mini Lemon Yogurt Tart (a light yogurt-based tartlet with fresh fruit topping).

#### 3) Dinner

- Oven-Baked Lemon Chicken (marinated in lemon juice, garlic, and herbs, baked until golden);
- Broccoli & Carrot Purée Soup (light cream-style soup blended with natural yogurt);
- Rice Pilaf with Tomatoes & Herbs (fluffy rice cooked with fresh tomatoes and herbs);

- Avocado-Yogurt Dip with Vegetable Sticks (creamy dip served with carrot and broccoli sticks);
- Warm Herbal Infusion (lemon and min);
- Frozen Yogurt with Lemon & Fruit (a refreshing, light dessert to finish the evening meal).

**Task 1.** You are tasked with preparing dinner menus for a fish restaurant called “Ocean Breeze”, located in Lisbon, Portugal. Create two different dinner menus: one for a regular weekday and one for the weekend, based on the basic response from ChatGPT. Use the following ingredients: salmon, cod, tuna, shrimp, mussels, squid, spinach, broccoli, carrots, tomatoes, rice, quinoa, avocado, lemon, and yogurt. Provide 3-5 suggestions for improving the menu generated by ChatGPT.

Dinner menus should be healthy and balanced, with seafood or fish as the main protein source. The weekend menu may include more elaborate or festive dishes, suitable for special dining occasions.

**Task 2.** You are tasked with preparing a breakfast menu for a Scandinavian café called “Nordic Delight”, located in Bergen, Norway, based on the basic response from ChatGPT. Use the following ingredients: smoked salmon, mackerel, eggs, oatmeal, whole grain bread, cucumbers, radishes, berries, yogurt, and honey.

The breakfast menu should be healthy and balanced, reflecting traditional Scandinavian flavors.

Provide 3-5 suggestions for improving the breakfast menu, considering taste, presentation, and guest satisfaction.

### **Example 2. Food design**

Create a modern presentation for the dish “Grilled Salmon with Vegetables.” Use AI generator.

Choose one, correct it, and prove corrections.

Solutions with ChatGpt:

1)



2)



3)



Answer: choose the second image (the sketch with the dark plate) because it is more illustrative and allows room for correction in modern plating principles.

In modern gastronomy, linear plating (row-alignment) is considered classical and predictable. Michelin plating guides (e.g., Bocuse d'Or standards) emphasize asymmetry and height to add sophistication. A dynamic cluster creates visual rhythm and draws the eye toward the center of the dish (Gestalt principle of focal point). Height variation (e.g., rolled zucchini ribbons, stacked carrots) introduces a 3D structure, making the dish look contemporary rather than flat.

A single lemon wedge is functional but not visually innovative. Modern plating aesthetics rely on fresh elements like microgreens and edible flowers to signal premium quality. Microgreens add texture, freshness, and verticality, while edible flowers provide color contrast (based on color theory in gastronomy). High-end European restaurants (e.g., Noma, Geranium) consistently use microgreens + edible flowers as final garnishes to convey elegance and refinement.

Corrections

- 1) Vegetables are aligned in a row (asparagus, carrots, zucchini, tomato), which looks linear and traditional. To arrange vegetables in a dynamic cluster with height variation (e.g., rolled zucchini ribbons, stacked carrots, microgreens) to give a modern 3D effect.
- 2) Only a lemon wedge and a couple of leaves are used. To add microgreens or edible flowers for freshness and elegance.

**Task 3.** Generate with AI a modern plate design for “Breakfast Bowl with Smoked Salmon, Eggs, and Scandinavian Vegetables.” Describe the generated presentation in detail (arrangement, colors, garnishes, balance). Identify one weak point in the composition (e.g., lack of verticality, too traditional alignment, missing freshness). Suggest a correction: describe how you would redesign this element. Prove your correction with reference to contemporary plating concepts (freshness, elegance, 3D layering, natural color contrasts).

**Task 4.** Create a modern presentation for the dessert “Chocolate Mousse with Berries.” Use AI generator. Focus on modern plating: height, asymmetry, textural contrasts (smooth mousse, crunchy elements, fresh berries).

Think about adding edible decorations: e.g., chocolate shards, berry coulis, mint microgreens.

Choose one variant, correct it, and prove corrections.

### **Example 3. Push and Pull Strategies in Gastronomy with AI**

Objective. Understand and apply AI-driven marketing strategies (Push and Pull) in gastronomy, analyze world cases, and create personalized campaigns using ChatGPT.

Read the following cases and answer the questions.

Case A. Push Strategy. Starbucks Personalized Offers Starbucks uses AI to send tailored promotions via mobile app notifications. Offers are based on customers' purchase history (e.g., "20% off your favorite Frappuccino this afternoon").

Case B. Pull Strategy. Domino's AI-Powered Chatbot Domino's developed an AI chatbot ("Dom") that allows customers to place orders via voice or text. Customers initiate the interaction, driven by curiosity and convenience.

### **Questions**

1. What is the main difference in how AI is applied in Case A and Case B?
2. Which KPIs (Key Performance Indicators) would best measure success in each case?
3. If you were a gastronomy manager, how would you combine both strategies?

**Task 5:** Use ChatGPT to design a short AI-driven campaign for a restaurant.

#### 1. Push Campaign:

- Create a personalized promotional message for a seafood restaurant using AI-driven customer data;
- Target - returning customers who often order salmon dishes.

#### 2. Pull Campaign:

- Design an AI-powered chatbot dialogue for first-time visitors;
- Purpose - help them explore the menu and discover seasonal offers.

## Solutions

### Case Study Analysis

#### 1. Difference

Starbucks . AI predicts and “pushes” offers before demand is expressed.

Domino’s . AI waits for the customer to initiate an order.

#### 2. KPIs

Starbucks. Conversion rate, app engagement, repeat purchases.

Domino’s. Chatbot interactions, order completion rate, customer satisfaction.

#### 3. Combined Strategy

Use push to bring customers back (notifications).

Use pull to improve customer experience (chatbot ordering).

Push Campaign Message (AI-driven):

“Hi Anna! We noticed you love our salmon fillet. This weekend only, enjoy a complimentary glass of Chardonnay with your salmon order. Book your table now!”

Pull Campaign Chatbot Dialogue (AI-powered):

Customer: “Hi, what’s special today?”

Chatbot: “Welcome! Today we recommend our seasonal grilled salmon with asparagus. Would you like me to show wine pairings?”

Customer: “Yes.”

Chatbot: “Great! Our AI sommelier suggests Sauvignon Blanc. Should I reserve a table for you?”

### **Task 6.** Push and Pull Strategies in European Gastronomy

Understand how AI-driven Push and Pull strategies are applied in the European gastronomy market, analyze real cases, and create localized campaigns using ChatGPT.

Case A. Push Strategy. Costa Coffee (UK). Costa Coffee uses AI-based loyalty apps to push personalized offers to British customers. For example, the app sends morning notifications such as “Enjoy your favorite Flat White today with 15% off before 11 a.m.”

Case B. Pull Strategy. Vapiano (Germany, Italy). Vapiano restaurants use AI-powered self-ordering kiosks. When customers start selecting pasta or pizza, the system suggests seasonal dishes (e.g., “Would you like to try our summer truffle pasta?”). The customer initiates the interaction.

## Questions

1. What is the key difference in how AI is applied in Case A (UK) and Case B (Germany/Italy)?
2. Which KPIs (Key Performance Indicators) are most relevant in each case on the European market?
3. If you managed a European restaurant chain, how would you integrate both Push and Pull strategies to increase sales and customer loyalty?

## Task 7: Use ChatGPT to design a short AI-driven campaign for a restaurant.

### 1. Push Campaign

Create a personalized promotional message for a Mediterranean seafood restaurant in Spain.

Target – returning customers who often order grilled fish.

Goal – attract them during weekday evenings when traffic is lower.

### 2. Pull Campaign

Design a short AI-powered chatbot dialogue for a French café in Paris.

Purpose – help first-time visitors discover seasonal pastries and coffee pairings.

## Example 4. Using customer data (Table 1):

- Sort and filter customers;
- Create pivot tables to visualize segments;
- Assign segments and justify segmentation criteria in notes.

**Table 1. Customer Data**

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Weather Condition	Notes
1	F	28	3	Pasta, Latte	12:00-14:00	Cold	Prefers hot drinks
2	M	35	1	Burger, Espresso	17:00-19:00	Sunny	Likes cold drinks

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Weather Condition	Notes
3	F	42	2	Salad, Tea	09:00-11:00	Rainy	Avoids heavy food
4	M	22	4	Pizza, Cola	18:00-20:00	Sunny	Student group visits
5	F	31	2	Sushi, Green Tea	12:00-14:00	Cold	Healthy lifestyle
6	M	29	5	Burger, Beer	20:00-22:00	Warm	Comes with colleagues
7	F	46	1	Soup, Tea	11:00-13:00	Rainy	Prefers light lunch
8	F	19	3	Fries, Smoothie	15:00-17:00	Sunny	Comes after classes
9	M	55	2	Steak, Red Wine	19:00-21:00	Cold	Business dinners
10	F	27	4	Veggie Burger, Coffee	10:00-12:00	Sunny	Vegan student
11	M	33	2	Pasta, Beer	18:00-20:00	Warm	Likes Italian cuisine
12	F	39	3	Salad, Herbal Tea	12:00-14:00	Rainy	Avoids fried food
13	M	24	5	Pizza, Soda	17:00-19:00	Sunny	With friends
14	F	44	1	Fish, White Wine	19:00-21:00	Cold	Business meetings
15	M	30	2	Burger, Coffee	12:00-14:00	Warm	Lunch break visits

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Weather Condition	Notes
16	F	25	4	Vegan Bowl, Latte	09:00-11:00	Rainy	Loves healthy starts
17	M	48	2	Steak, Beer	20:00-22:00	Cold	After work relax
18	F	21	3	Wrap, Smoothie	14:00-16:00	Sunny	Active lifestyle
19	M	37	1	Burger, Whiskey	20:00-22:00	Cold	Social drinker
20	F	50	2	Soup, Salad	11:00-13:00	Rainy	Healthy middle-aged
21	M	23	4	Fries, Burger	18:00-20:00	Warm	Comes in groups
22	F	32	3	Pasta, Cappuccino	12:00-14:00	Sunny	Likes cozy lunches
23	M	40	2	Steak, Red Wine	19:00-21:00	Rainy	Business talks
24	F	27	5	Salad, Smoothie	09:00-11:00	Warm	Fitness enthusiast
25	M	35	3	Pizza, Beer	17:00-19:00	Sunny	Casual after work
26	F	41	1	Fish, Tea	18:00-20:00	Cold	Rare visits
27	M	28	4	Burger, Cola	19:00-21:00	Warm	After gym
28	F	36	2	Soup, Salad	12:00-14:00	Rainy	Family visits
29	M	22	3	Fries, Pizza	16:00-18:00	Sunny	Always with friends
30	F	45	1	Pasta, Tea	11:00-13:00	Cold	Prefers quiet atmosphere

## Solutions

### 1. Sorting and Filtering

By Age: Identify age-based customer groups (e.g., <25, 25–40, >40).

By Visit Frequency: Highlight loyal vs occasional visitors.

By Peak Visit Time: Separate breakfast, lunch, and dinner visitors.

By Favorite Dishes: Identify preferences for dietary patterns (healthy, fast food, drinks).

By Weather Condition: See how visits change with weather.

Filtered Examples:

Frequent visitors ( $\geq 4$  times/week): Customers 004, 006, 010, 013, 016, 021, 024, 027.

Lunch visitors (09:00–14:00): Customers 001, 003, 005, 007, 010, 012, 016, 020, 022, 024, 028, 030.

Health-conscious (Salad, Veggie, Vegan): Customers 003, 005, 010, 012, 016, 018, 020, 024, 028.

### 2. Pivot Tables for Visualization

**Table 2. Pivot 1. Visit Frequency by Age Group and Gender**

Age Group	Female	Male	Total
<25	2	2	4
25–40	5	5	10
>40	3	3	6

**Table 2. Pivot 2. Favorite Dishes by Weather Condition**

Favorite Dish Group	~	Warm	Sunny	Rainy
Fast Food	2	4	5	0
Healthy/Light	4	1	1	5
Alcoholic/Drinks	2	2	2	2

**Table 3. Pivot 3. Peak Visit Time by Gender**

Peak Time	Female	Male
09:00–11:00	2	0
10:00–12:00	1	0
11:00–13:00	2	0
12:00–14:00	3	1
14:00–16:00	1	0
15:00–17:00	1	1
16:00–18:00	0	1
17:00–19:00	0	3
18:00–20:00	0	2
19:00–21:00	1	3
20:00–22:00	0	2

### 3. Customer Segmentation

Suggested Segments and Criteria:

Frequency-based:

Loyal Customers ( $\geq 4$  visits/week): 004, 006, 010, 013, 016, 021, 024, 027.

Reason: High engagement; potential for loyalty programs.

Occasional Visitors (1–2 visits/week): 002, 003, 005, 007, 009, 011, 014, 015, 017, 019, 020, 023, 026, 028, 030.

Reason: Target for promotional campaigns to increase visits.

Moderate Visitors (3 visits/week): 001, 008, 012, 018, 022, 025, 029.

Reason: Potential to upsell or offer personalized menu suggestions.

Dietary Preference:

Health-focused: Salad, Vegan, Soup (003, 005, 010, 012, 016, 018, 020, 024, 028).

Fast Food Lovers: Burger, Pizza, Fries (002, 004, 006, 008, 011, 013, 015, 021, 025, 027, 029).

Alcohol & Gourmet: Steak, Wine, Beer, Whiskey (009, 017, 019, 023).

Time-based (Peak Visit Time):

Breakfast / Early Lunch (09:00–12:00): 003, 010, 016, 024.

Lunch (12:00–14:00): 001, 005, 012, 022, 028.

Afternoon (14:00–17:00): 008, 018, 029.

Evening (17:00–22:00): 002, 004, 006, 009, 011, 013, 014, 015, 017, 019, 021, 023, 025, 027.

Notes. Segmentation by frequency is essential to design loyalty programs, promotional campaigns, and retention strategies.

Dietary preference segmentation helps in menu customization, targeted offers, and nutritional marketing.

Time-based segmentation is crucial for staff scheduling, menu planning, and peak-hour promotions.

Weather condition consideration can guide seasonal promotions (e.g., hot drinks in cold weather, smoothies in sunny weather).

### Task 8. Customer Segmentation. Office Area Cafe, Warsaw

Using the customer data (Table 4):

- 1) sort and filter customers based on visit frequency, age, and favorite dishes
- 2) create pivot tables to visualize customer segments by visit frequency, dietary preference (e.g., health-focused, fast food, gourmet), peak visit time (morning, lunch, afternoon)
- 3) assign segments to each customer and justify your segmentation criteria in notes.

Table 4. Customer Data

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Notes
1	F	28	5	Cappuccino, Croissant	08:00-09:00	Morning coffee before work

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Notes
2	M	34	3	Sandwich, Espresso	12:00-13:00	Lunch break
3	F	42	2	Salad, Tea	12:00-13:00	Light lunch, health-focused
4	M	25	4	Panini, Latte	08:30-09:30	Quick breakfast
5	F	31	3	Vegan Bowl, Green Tea	12:00-13:00	Health-conscious office worker
6	M	29	5	Burger, Coffee	12:30-13:30	Popular lunchtime choice
7	F	45	1	Soup, Herbal Tea	12:00-13:00	Occasional visitor
8	F	22	3	Smoothie, Wrap	15:00-16:00	Afternoon snack
9	M	50	2	Steak Sandwich, Beer	13:00-14:00	Business lunch
10	F	27	4	Latte, Croissant	08:00-09:00	Regular morning visitor
11	M	33	2	Pasta Salad, Juice	12:00-13:00	Healthy lunch
12	F	36	3	Quiche, Cappuccino	12:30-13:30	Office worker
13	M	24	5	Bagel, Coffee	08:00-09:00	Early riser
14	F	44	1	Fish Sandwich, Tea	13:00-14:00	Occasional lunch
15	M	30	2	Burger, Soda	12:00-13:00	Quick lunch

Customer ID	Gender	Age	Visit Frequency (per week)	Favorite Dishes	Peak Visit Time	Notes
16	F	26	4	Vegan Wrap, Smoothie	12:00-13:00	Healthy lunch
17	M	48	2	Club Sandwich, Coffee	08:30-09:30	Morning coffee
18	F	23	3	Smoothie, Muffin	15:00-16:00	Afternoon snack
19	M	35	1	Pizza Slice, Soda	12:00-13:00	Casual lunch
20	F	32	3	Salad, Herbal Tea	12:30-13:30	Light lunch

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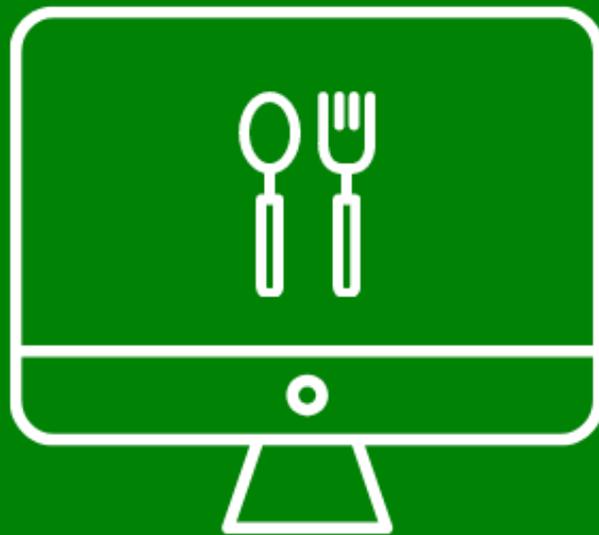
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