

AI-Driven Optimization Strategy

**Empowering Innovation through Intelligent AI-Driven
Solutions**

Agenda

- ▶ Introduction to the AI/ML Approach
- ▶ Transitioning to AI: Key strategies
- ▶ Artificial intelligence and its subsets
- ▶ Exploration of Key Use Cases



AI Transition

Overcoming Barriers and Unlocking AI-Driven Business Transformation

Organizational AI resistance

Inadequate AI Business integration

Deficient ecosystem collaboration

Integrated intelligence capability

Process Automation and Augmentation capability

AI Ecosystem orchestration capability

AI Infrastructure and Platform capability

Inadequate AI Business integration

Predictive Analytics

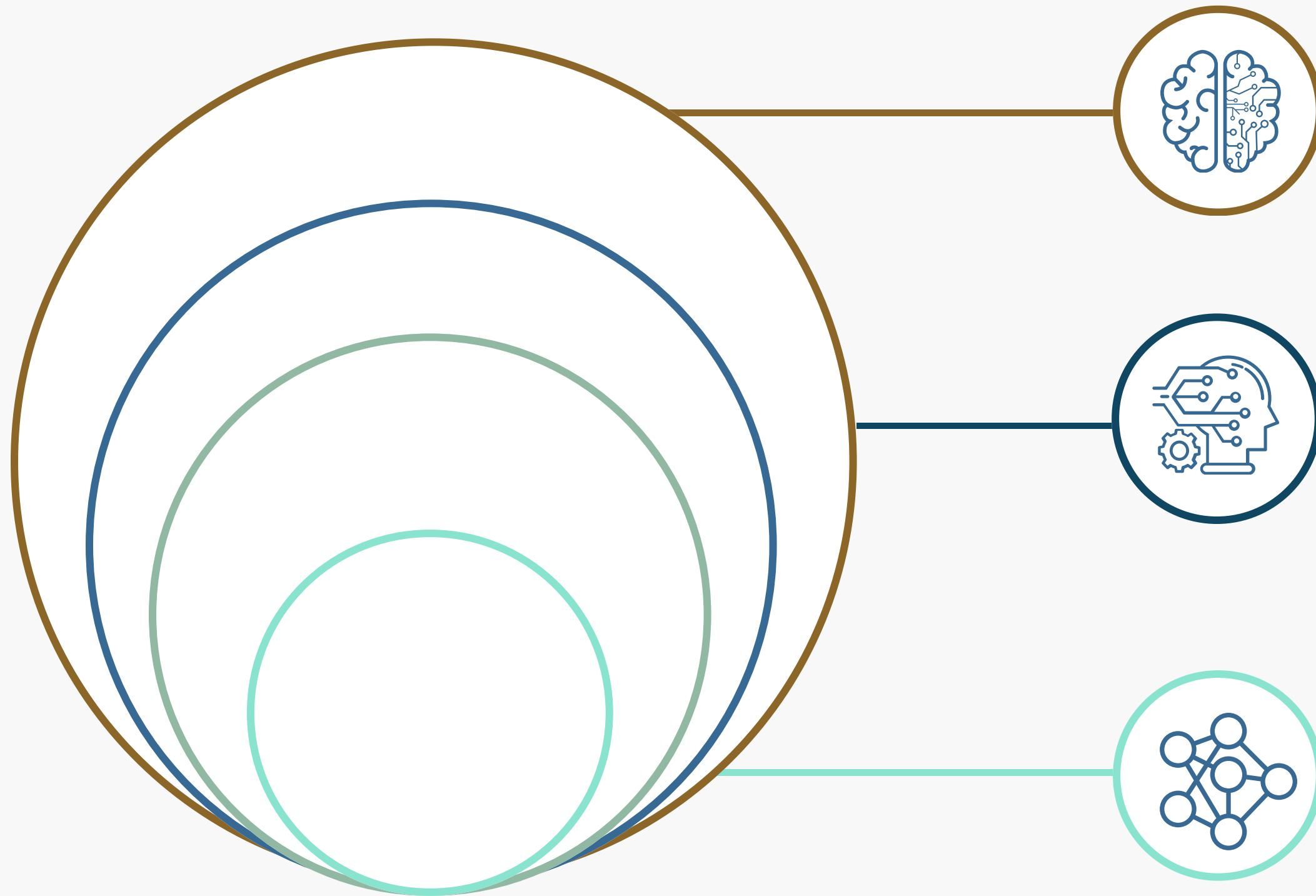
Operational Scalability

Multi-level barriers

AI Capabilities development

AI-enabled Optimization

Artificial intelligence and its subsets



Artificial Intelligence (AI)

- A field of study that uses computers to do processes that mimic human behavior



Machine Learning (ML)

- A subset of AI
- Uses algorithms to learn and improve from training data



Deep Learning (DL)

- A subset of ML
- Uses multilayer networks to build models that are inspired by the human brain

How generative AI will transform sales function



Increased Probability of Sale

- Generative AI can help to formulate details consumer profiles from data to identify and prioritize potential leads.
- Information about client preferences can be derived to increase the conversion rates of marketing campaigns.



Improved Lead Development

- Generative AI can help to nurture the leads by synthesizing relevant product sales information and creating customer profiles.
- Follow ups and lead nurturing process can also be automated through generative AI tools.



Sales Content Generation

- Generative AI can help to create sales content such as product descriptions, sales scripts etc.
- Automated content generation can help to save time of sales team.

AI-Powered Image Classification

Overview DigiPrima automated the client's manual image classification using AI technology, enhancing the categorization of jewelry products on their e-commerce platform.

Key • Uses deep learning for accurate jewelry image categorization, reducing manual errors.

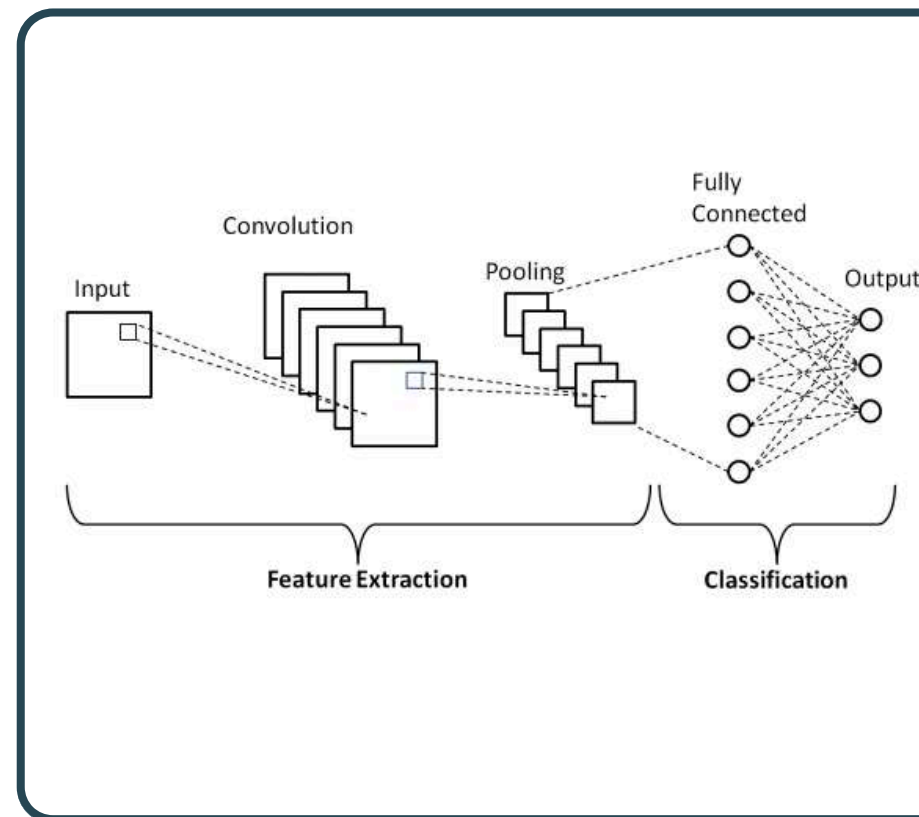
Features • Automatically uploads images to AWS, speeding up B2B product listings.

Challenges

High Volume of Data: Managing and accurately classifying a large volume of jewelry images (2,000 weekly) led to delays and potential errors.

Complex Categorization: Differentiating among 40 product types and various jewelry color variations posed significant challenges in maintaining accuracy.

SAMPLE



Solutions

AI-Powered Automation: Implemented an AI-based solution using the Xception model to automate the image classification process.

Continuous Improvement: Established a feedback loop for ongoing model training and fine-tuning, ensuring the system adapts to new product data.

Industry Segment

- Ecommerce

Technology & Tools

- TensorFlow/Keras
- Pandas and NumPy
- SQL Server
- Python

AI-Powered Smart Parking Management

Overview

DigiPrima was engaged to assess and transform the client's parking management system, providing an AI-powered solution that leverages CCTV feeds to deliver real-time parking availability, ensuring cost-effective, scalable, and secure operations without the need for IoT-based sensors.

Key

- AI analyzes CCTV feeds for real-time parking availability, replacing costly IoT sensors.

Features

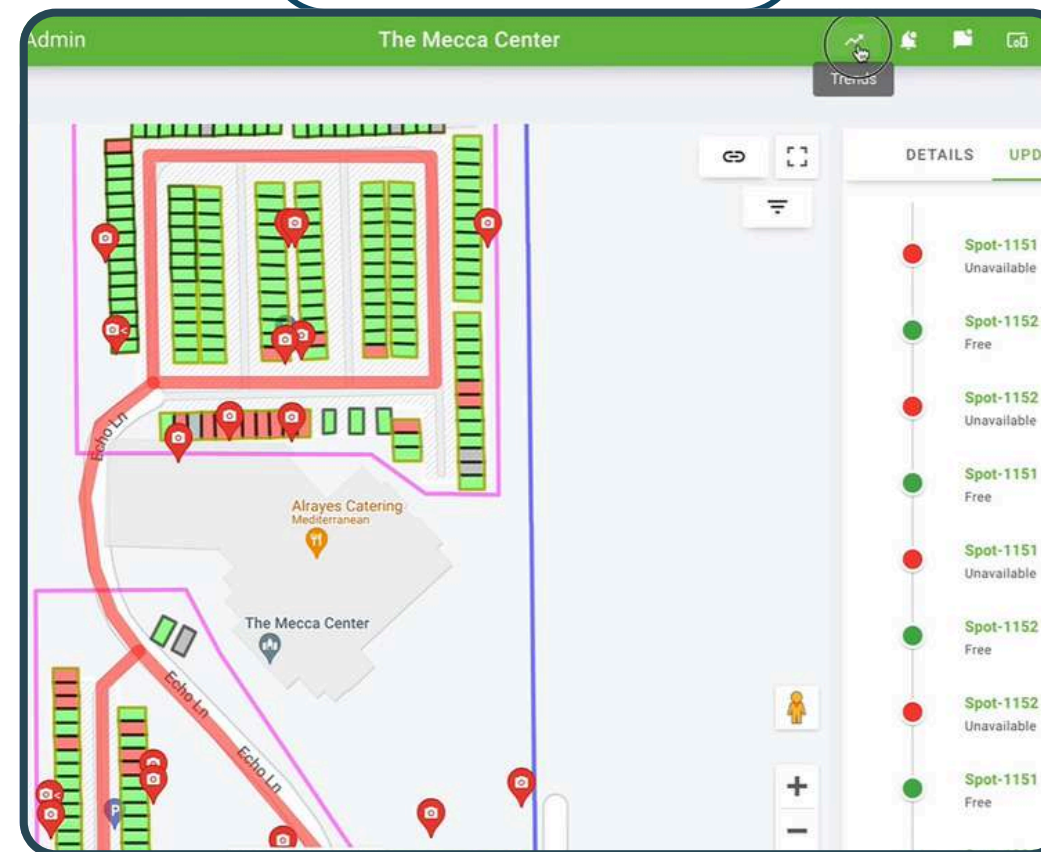
- Offers flexible cloud (Azure) or edge (Jetson) deployment for secure, scalable management.

Challenges

Traditional smart parking systems relied on expensive IoT sensors for each parking spot, making them unsuitable for outdoor lots.

The lack of real-time data on parking availability led to inefficient space utilization and lost revenue for parking lot owners.

Snap Shot



Solutions

- DigiPrima created an AI system using CCTV feeds to provide real-time parking availability without extra sensors.
- The solution offers flexible deployment with cloud (Azure) or edge (Nvidia Jetson) options for secure processing.

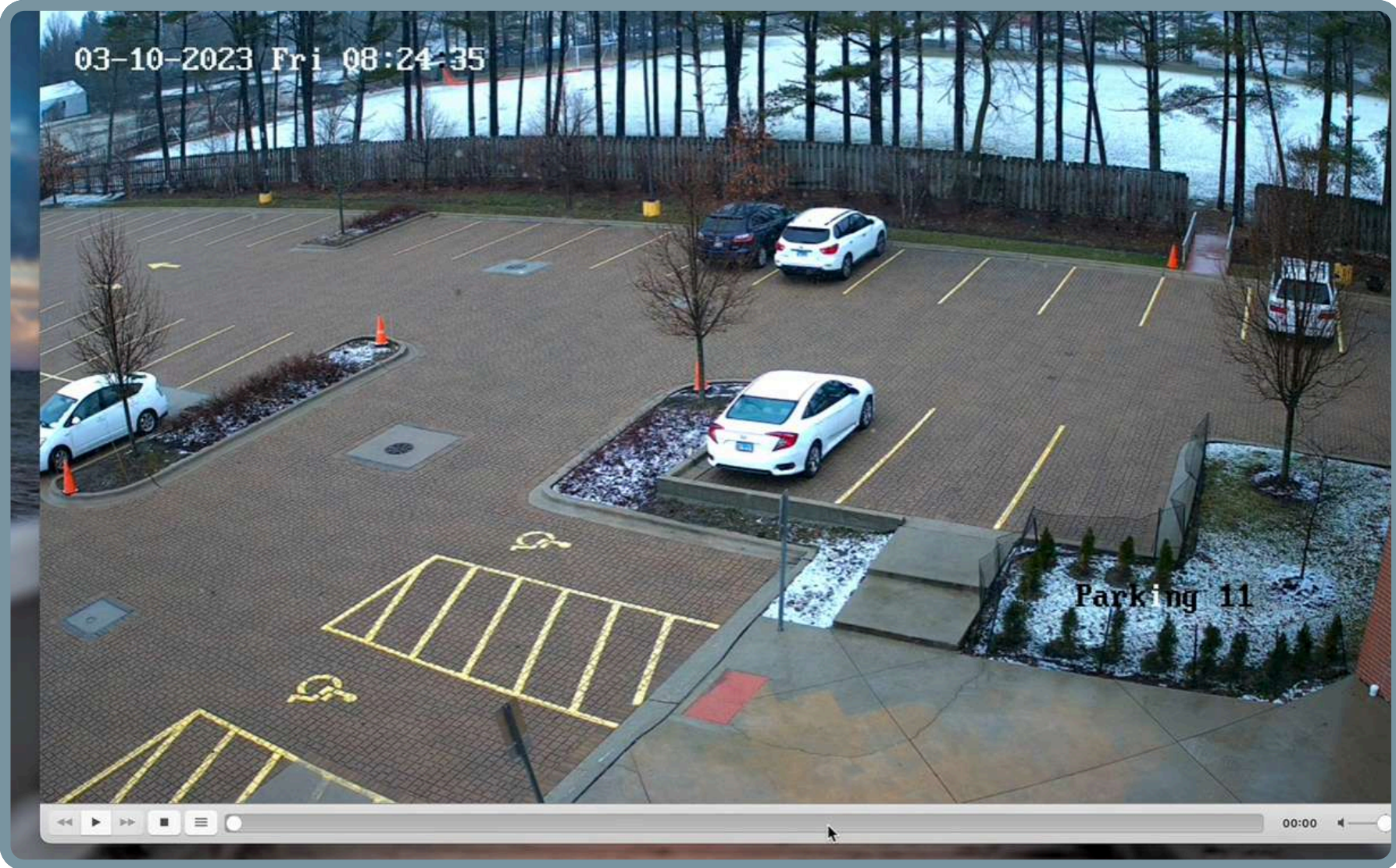
Industry Segment

- Transportation and Parking Management

Technology & Tools

- Microsoft Azure
- Nvidia Jetson
- CCTV Cameras
- AI and Machine Learning Models

AI-Powered Smart Parking Management



Admin The Mecca Center

Spot ID	Status	Timestamp	Duration
Spot-1151	Unavailable	10/03/2023, 8:24:20 pm	6 seconds
Spot-1152	Free	10/03/2023, 8:24:20 pm	6 seconds
Spot-1152	Unavailable	10/03/2023, 8:24:14 pm	8 seconds
Spot-1151	Free	10/03/2023, 8:24:14 pm	8 seconds
Spot-1151	Unavailable	10/03/2023, 8:24:05 pm	2 seconds
Spot-1152	Free	10/03/2023, 8:24:05 pm	2 seconds
Spot-1152	Unavailable	10/03/2023, 8:24:02 pm	9 seconds
Spot-1151	Free	10/03/2023, 8:24:02 pm	9 seconds

Tools we Used



AI-Driven Patient Scheduling Optimization

Overview

DigiPrima was engaged to enhance the client's patient scheduling process by implementing an AI and ML-driven solution that analyzes patient records to predict upcoming doctor appointments, seamlessly integrating with their existing ERP system for improved efficiency and proactive health management.

Key

- Analyzes patient records to predict upcoming doctor appointments.

Features

- Automates appointment creation and improves patient health tracking.

Challenges

Predicting doctor appointments required accurate analysis of patient records, posing challenges in data integration and forecasting.

The existing scheduling system was inefficient, leading to increased manual effort and difficulty in tracking individual patient health effectively.

Snap Shot



Solutions

- Developed an AI and ML solution to accurately predict doctor appointments from patient records.
- Integrated with the ERP system to automate appointment creation and enhance patient tracking.

Industry Segment

- Healthcare

Technology & Tools

- Python
- TensorFlow
- Power BI
- SAP

NLP-Driven Recommendation Engine

Overview The project creates a personalized movie recommendation system that enhances user engagement by suggesting films based on preferences. It combines collaborative and content-based filtering.

Key • Combines collaborative and content-based filtering for precise movie suggestions.

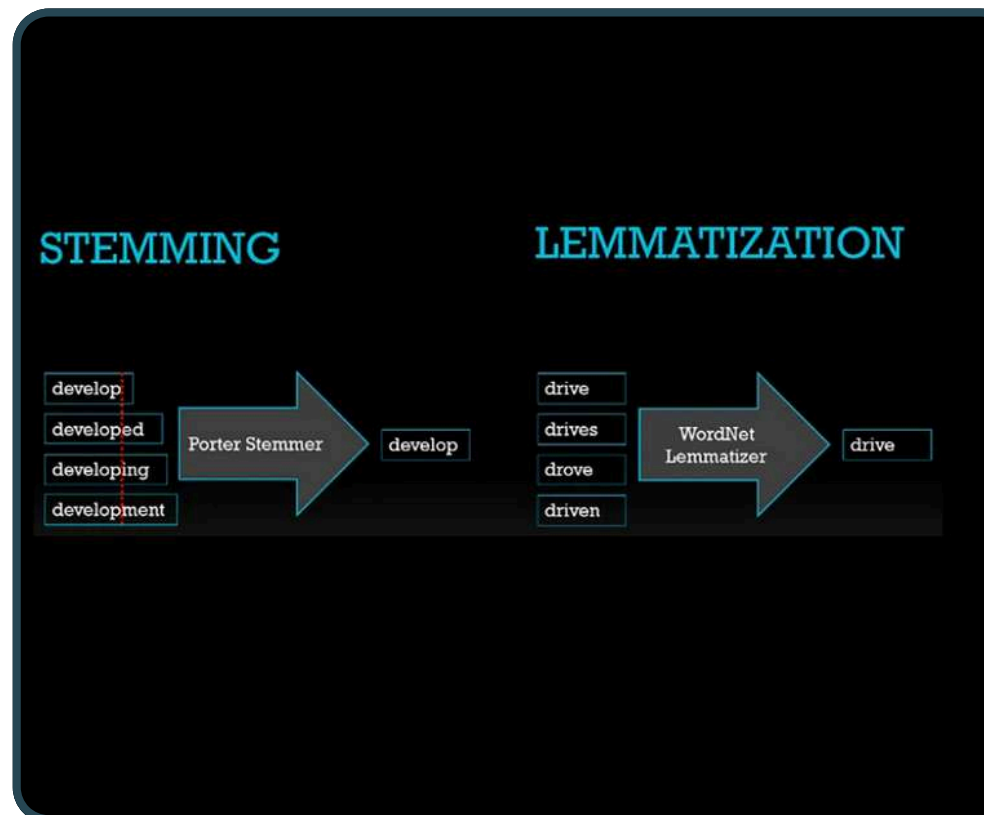
Features • Utilizes NLP methods to analyze movie data, enhancing personalization and overall user engagement.

Challenges

Data Volume and Complexity: Analyzing vast amounts of movie data and user interactions to deliver relevant recommendations while maintaining performance and accuracy.

Integrating Diverse Data Sources: Effectively combining various data types, including user ratings and movie attributes, to create a seamless recommendation system.

SAMPLE



Solutions

- **Hybrid Filtering:** Combine collaborative and content-based filtering to provide comprehensive movie recommendations.
- **NLP Techniques:** Use NLP for data preprocessing and similarity analysis to enhance recommendation accuracy.

Industry Segment

- Media & Entertainment.

Technology & Tools

- Scikit-learn
- Count vectorization, stemming, lemmatization
- Python

AI-Powered Conversational Analysis

Overview The project creates an AI application that extracts insights from audio and video discussions, using speech-to-text and machine learning to enhance developer efficiency.

Key • Uses speech-to-text to summarize conversations and extract key action items.

Features • Leverages machine learning to streamline requirement gathering for developers.

Challenges

Complexity in Implementation: Integrating various AI and ML tools to create a seamless application requires significant development and training effort.

Data Variability: Ensuring accurate insights from diverse conversation styles and formats poses challenges in model training and performance.

Snap Shot



Solutions

- **Targeted Model Training:** Train machine learning models with specific datasets for improved accuracy in insights extraction.

- **Intuitive UI Design:** Create a user-friendly interface to simplify interactions for developers.

Industry Segment

- IT Services

Technology & Tools

- Angular
- TensorFlow
- Keras



Thank you

We Look Forward To Working With You

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