

## Personalized Marketing using Machine Learning for Retail

# Predictive Analytics & Optimisation

Predict Events Using Machine Learning & Artificial Intelligence

## **Predict Business Outcomes**

- Sales & Expenditure Forecasting
- Next Best Action and ML-based Marketing Personalisation
- Staff and Resource Optimisation

### **Predict Incidents**

- Predict OHS Incidents by combining incident history with environmental variables and staff activities
- Machine-Learning-Based Dynamic Employee Risk Profiles

### Asset Monitoring and Optimisation

- Asset/Process Failure (Condition Based Monitoring) and Critical Control Monitoring
- Downtime Prediction and Prevention
- Optimise Plant and Machinery to Increase Throughput and Reduce Running Costs



Eliminate

breakdowns

Reduce maintenance costs by up to 10%

Reduce capital investment by

5%

75% forecast savings Cut unplanned outages by up to 90%



# Data-Driven Customer Personas



## Unsupervised ML segmentation to understand new clusters of customers and what motivates them



Understand how to **cross-sell**, **up-sell and retain** by conducting workshops based on a deep understanding of the statistics and data to create Customer Personas. Some examples might include:

#### • Will the Weekend Warrior

- Young, male customer between 18 and 25 who tends to visit on the weekends a few times a month.
- Spends between \$50 and \$250 on the Pokies
- Purchases high volumes of alcohol and usually a meal on the weekend.
- Visits the Bottle Shop on average every 2-4 weeks.

#### Peta the Professional

- Female customer who typically visits once a week after work.
- Predictable visit schedule, likely tied to work schedule.
- Usually stays for a few drinks and a meal.

#### Gary the Gambler

- Male customer who typically spends above \$500 per month on the Pokies
- Makes up 10% of customers
- Generates 40% of revenue
- Rita the Retail Shopper (Bottle Shop Customer)
  - Very rarely visits the pub, Low spend on F&B
  - Visits the Bottle Shop on average every 2-3 months.



## AI Consulting Group ML Framework



## 5-Day Data Lakehouse Implementation (Azure EBI)



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## Agile Delivery for Maximum Business Flexibility



## Our End-to-End Approach



## **Opportunity Catalogue**

#### Activities:

- Site Walkthroughs
- Data Landscape Maturity Assessment
- Board Priority Identification
- Business Priority Identification
- Operations Research
- Exploration with SMEs
- Top 10 Cost Drivers
- Top 10 Revenue Drivers

#### **Outputs:**

- Opportunity Priority List
- Opportunity Roadmap
- Business Case Development
- Architecture Strategy

### Design, Build & Test

- Security by Design & AD
- IOT and Edge Considerations
- Platform Adoption
- Provisioning Environments
- Design Workshops
- Define Architectures
- Network Design
- UX Design
- Disaster Recovery
- Process Design
- Application Development
- SME Validation
- Information Flow
- Dev Ops (CI/CD)
- Testing
- Deployment
- Platform Monitoring
- Change Management
- Documentation

### AI & Optimisation

- Reporting
- Master Data Management
- KPI Monitoring
- Dashboards
- Stream Analytics
- Text and Sentiment Analytics
- Image Recognition
- Emotion API
- Natural Language Processing
- Voice Analytics
- Video Analytics
- Model Optimisation
- Machine Learning
- Unsupervised Learning
- Reinforcement Learning
- Decision Support
- Recommendation Engines
- Simulations
- Digital Twins
- Autonomous Control
- Physical Automation

### **Business Transformation**

- Return on Investment
  - Operational Efficiency
  - Additional Revenue
  - Reduced Cost
  - Increased Customer Satisfaction
- Increased Market Share
- Board & Executive Assurance
- Risk Mitigation