Role: Data Analyst | Industry: Pharmaceutical

Customer Engagement Analytics

Dynamic Radar System for Physician Engagement Optimization

Project Timeline: September 2021 - February 2022
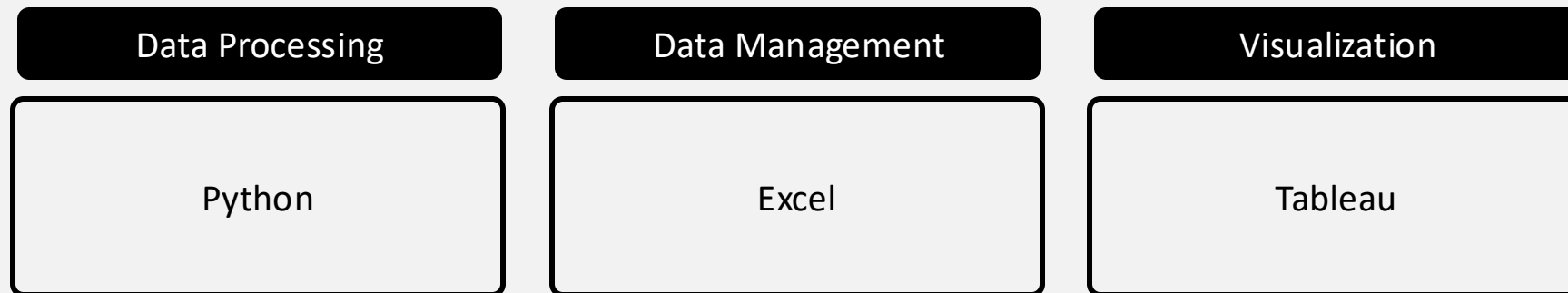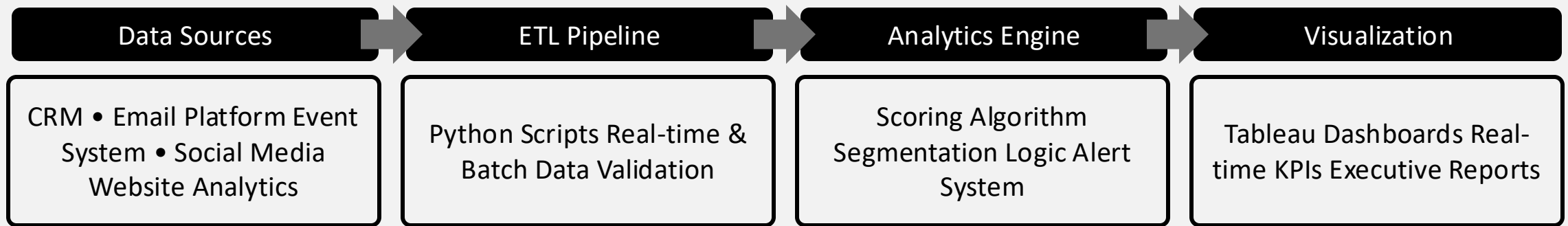
Business Challenge & Solution

Key Challenges

- Manual Lead Identification: Inefficient process to identify high-potential physicians from 18,000+ database
- No Real-Time Monitoring: Lack of campaign performance visibility across multiple channels
- Reactive Approach: No early warning system for declining physician engagement
- Siloed Data: Disconnected systems preventing holistic customer view

Our Solutions

- Dynamic Engagement: Radar Real-time scoring and segmentation system for proactive management
- Multi-Channel Analytics: Integrated dashboard tracking performance across all touchpoints
- Predictive Alerts: Early warning system with automated intervention triggers
- Unified Data Platform: 360-degree physician view enabling data-driven decisions

System Architecture & Technology Stack

Data Sources	➤	ETL Pipeline	➤	Analytics Engine	➤	Visualization
CRM • Email Platform Event System • Social Media Website Analytics		Python Scripts Real-time & Batch Data Validation		Scoring Algorithm Segmentation Logic Alert System		Tableau Dashboards Real-time KPIs Executive Reports

Data Processing	Data Management	Visualization
Python	Excel	Tableau

Dynamic Engagement Radar System

Watch List - High Value

Potential - Growth

Alert - Intervention

Scoring Components

Engagement Score Formula: Score = 0.3×Recency + 0.25×Frequency + 0.25×Depth + 0.2×Diversity
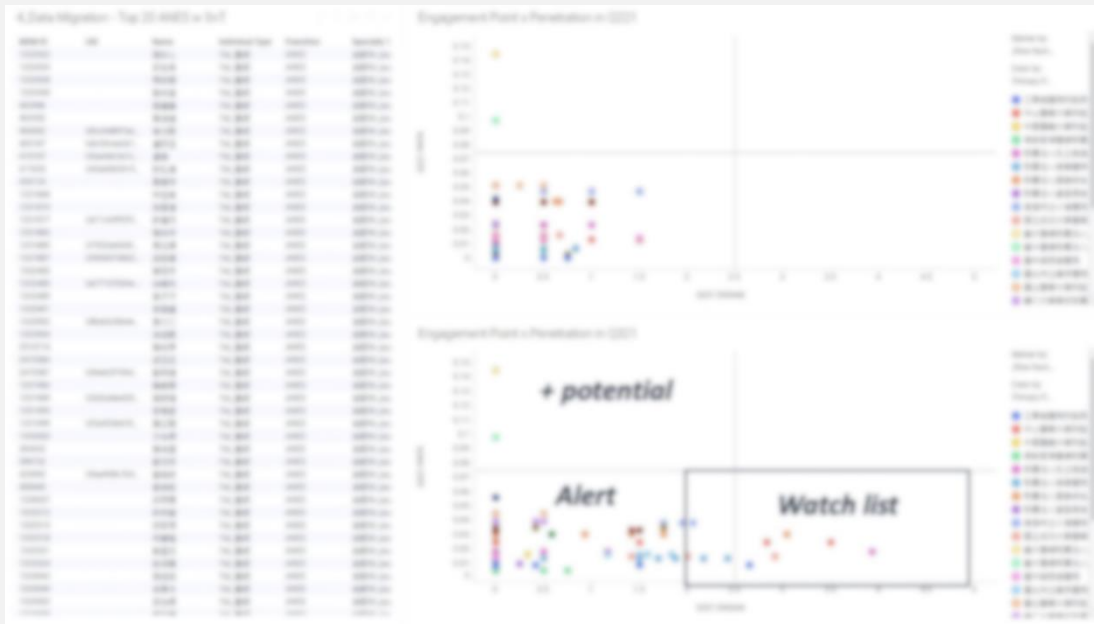
Alert Triggers

- 30% score decrease in 30 days
- No activity for 45+ days
- Unsubscribe/complaint events
- 50% reduction in active channels

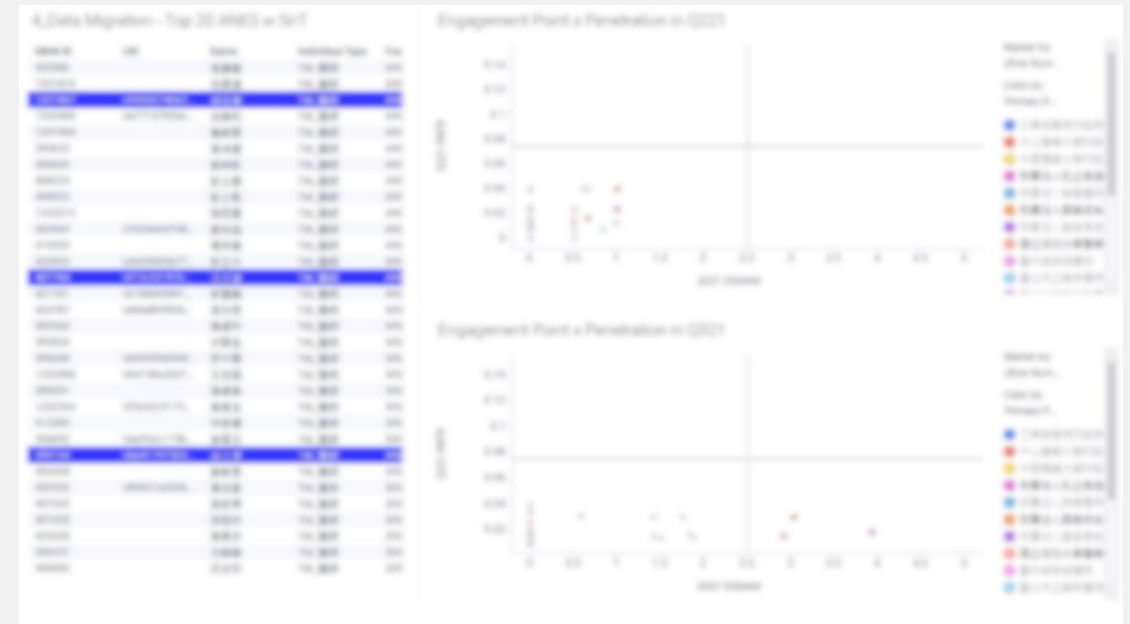Key Insight: Early intervention prevents 80% of physician disengagements

Analytics Dashboard & Insights

Real-Time Performance Monitoring

Interactive Scatter Plot - Physician Positioning

Engagement vs Penetration Analysis

Business Impact & Quantified Results

300+
High-Potential Physicians Identified

40%
Social Media to Event Conversion

120
Physicians Successfully Converted

25%
Marketing ROI Improvement

Data-Driven Decision Making
Transformed intuition-based marketing into evidence-driven strategy

Proactive Engagement Management
Early warning system prevents customer churn and maximizes retention

Optimized Resource Allocation
Focus marketing spend on highest-converting channels and audiences

Scalable Growth Framework
Reusable methodology supporting business expansion without proportional cost increase

Implementation Approach & Methodology

Sept 2021	Nov 2021	Jan 2022	Feb 2022
Requirements & Analysis	Development & Testing	Integration & Validation	Go-Live & Optimization

Data Integration	Scoring Algorithm	Segmentation Logic	Real-Time Dashboard
ETL pipeline connecting 5+ source systems with real-time and batch processing capabilities	Multi-dimensional engagement scoring with weighted components and peer benchmarking	Dynamic three-tier classification with automated reassignment based on behavioral changes	Interactive Tableau dashboard with drill-down capabilities and automated alerting

Key Learnings & Future Roadmap

Data Quality is Critical: 95% completeness threshold essential for reliable insights

User-Centric Design: Stakeholder feedback drives successful adoption and usage

Cross-Functional Collaboration: Marketing and analytics partnership maximizes impact

Continuous Optimization: Regular model retraining maintains accuracy and relevance

AI-Powered Insights
Machine learning for predictive modeling and automated optimization

Real-Time Personalization
Dynamic content recommendations based on individual physician preferences

Advanced Attribution
Multi-touch attribution modeling for comprehensive campaign impact assessment

Mobile Application
Dedicated mobile app for field teams with offline capabilities