Microservices Architecture Arabic Morphophonological Project - Redesigned Architecture API Gateway (Unified Interface) Pattern Service Phonology Service Phonology Service Phonology Service Database Schema Structure morphophonological Project - Redesigned Architecture phonological Project - Redesigned Architecture Analytics Service Pattern Service Phonology Service Phonology Service Integration Service Analytics Service

Cache DB

Data Processing Pipeline

Phonology DB

Message Queue (Event Bus) Analytics DB

Roots DB

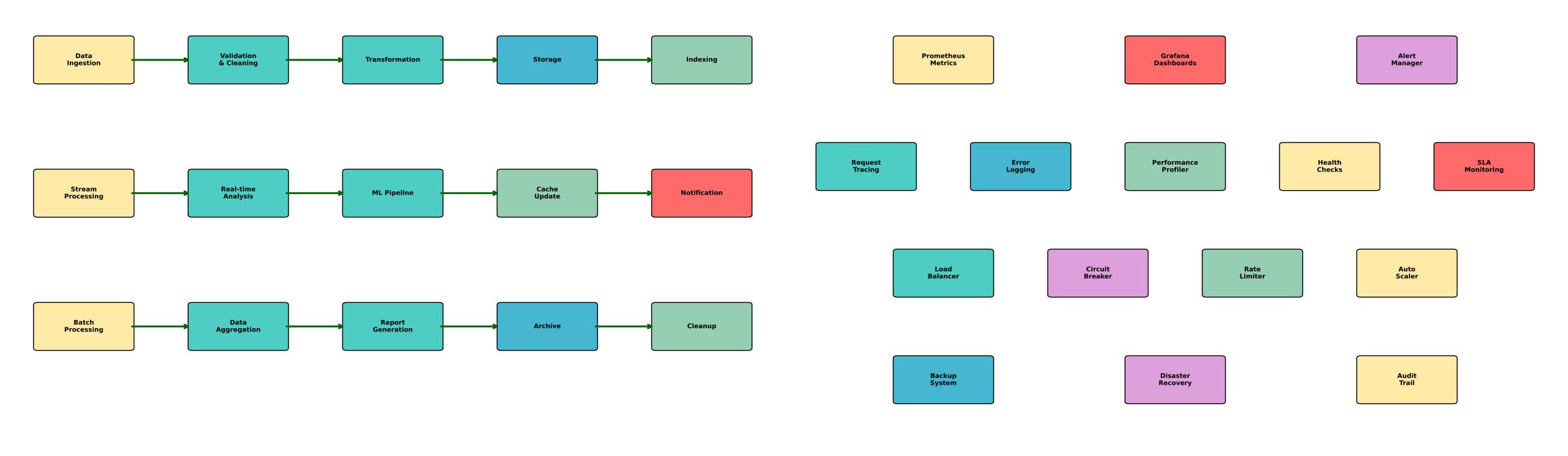
Patterns DB

Performance & Monitoring Dashboard

generated_ words

usage_ analytics

applied_ rules_ log



API Layer Services Database Cache/Index Analytics Security