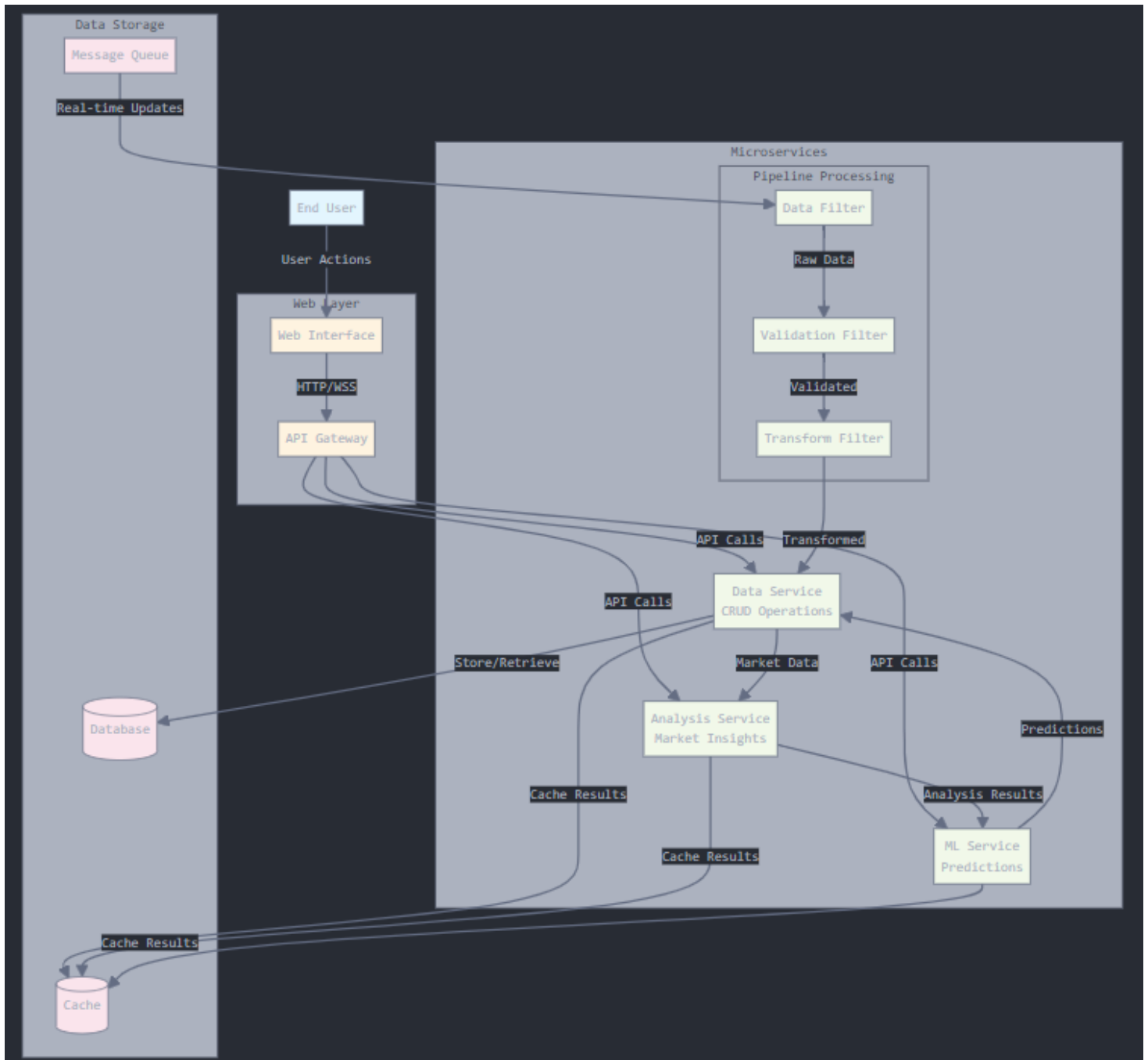


Execution Architecture



Runtime Components:

1. Web Layer
 - End User interaction via web interface
 - API Gateway for request routing

- WebSocket for real-time updates

2. Microservices

- Data Service: CRUD operations, data management
- Analysis Service: Market insights, technical analysis
- ML Service: Trading predictions
- Pipeline: Data filtering, validation, transformation

3. Data Storage

- Database: PostgreSQL for persistence
- Cache: Redis for performance
- Message Queue: Real-time updates

Data Flows:

- User → Interface → Gateway → Services
- Pipeline → Data Service → Database
- Services ↔ Cache for optimization
- MQ → Pipeline for real-time processing

Key Features:

- Real-time market data processing
- Scalable microservices architecture
- Efficient data caching
- Pipeline-based data transformation