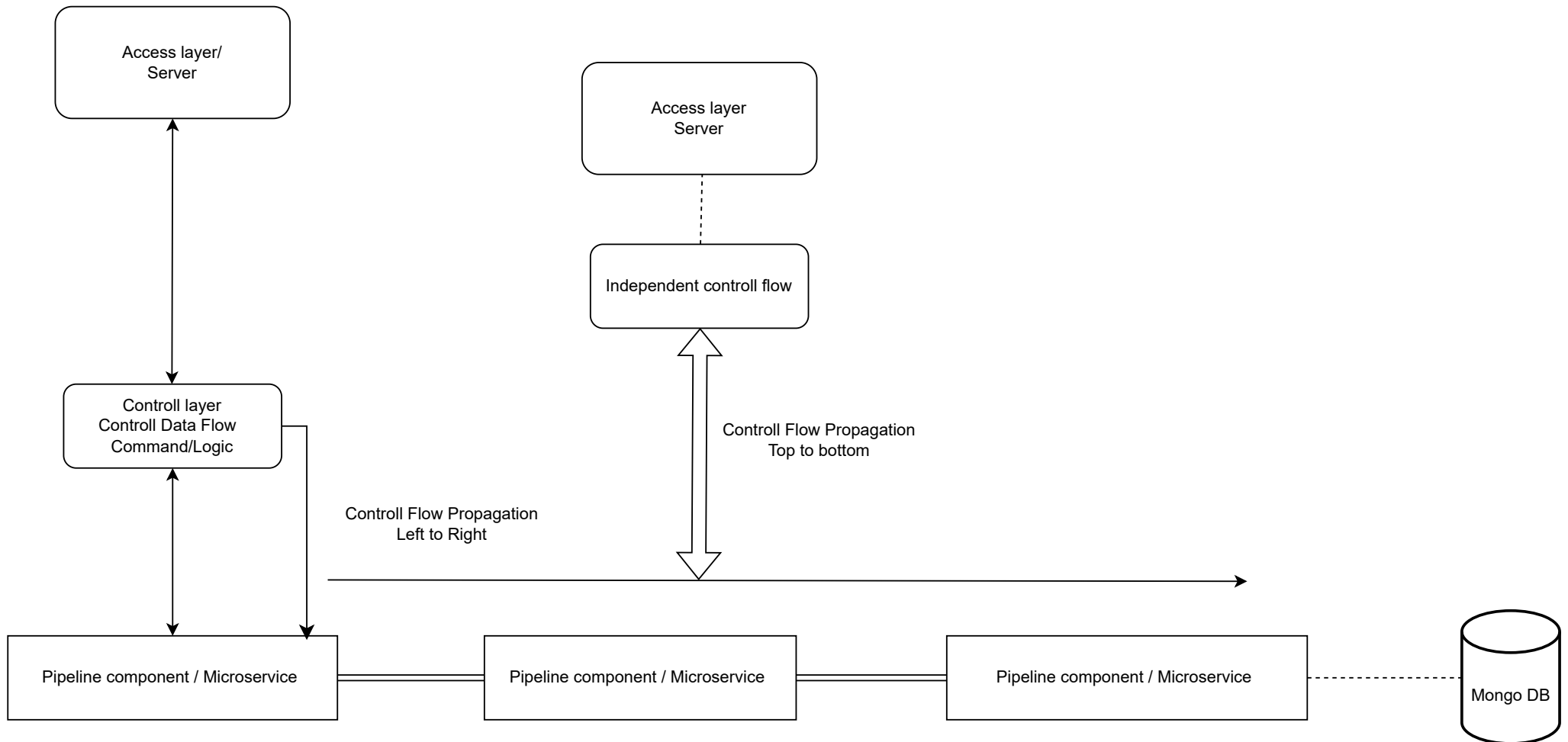


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## Pipeline design Philosophy

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## List of Basic task by Micro services

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### Stream Service

1. Camera Thread/ Process creation
2. Thread management design
3. Control logic development
4. Kafka Producer development
5. **Server integration**
6. Scaling test (vertical/**horizontal**)
7. **Logging**
8. **Test and Deploy in DevOps environment**

### Kafka

1. Kafka server configuration
2. Implement Advanced Kafka features recommended in Kafka Documentation
3. Kafka Multi-Broker Multi-Node Test
4. Kafka Topic retention period Test
5. **Test and Deploy in DevOps environment**

### Preprocessor

1. Kafka Subscriber development
2. Pre-process algorithm Development
3. Control Logic development
4. Data structure creation
5. Data warehouse CRUD creation.
6. **Logging**
7. Scaling Test (Vertical/**Horizontal**)
8. **Test and Deploy in DevOps environment**

### Data Warehouse



1. Advanced DB configuration  
Recommended by Documentation.
2. IOps Test
3. Data incoming/outgoing limit Test.
4. Collection naming and retention Configuration.
5. Scaling Test (Vertical/**Horizontal**)
6. **Test and Deploy in DevOps environment**

### Model Service

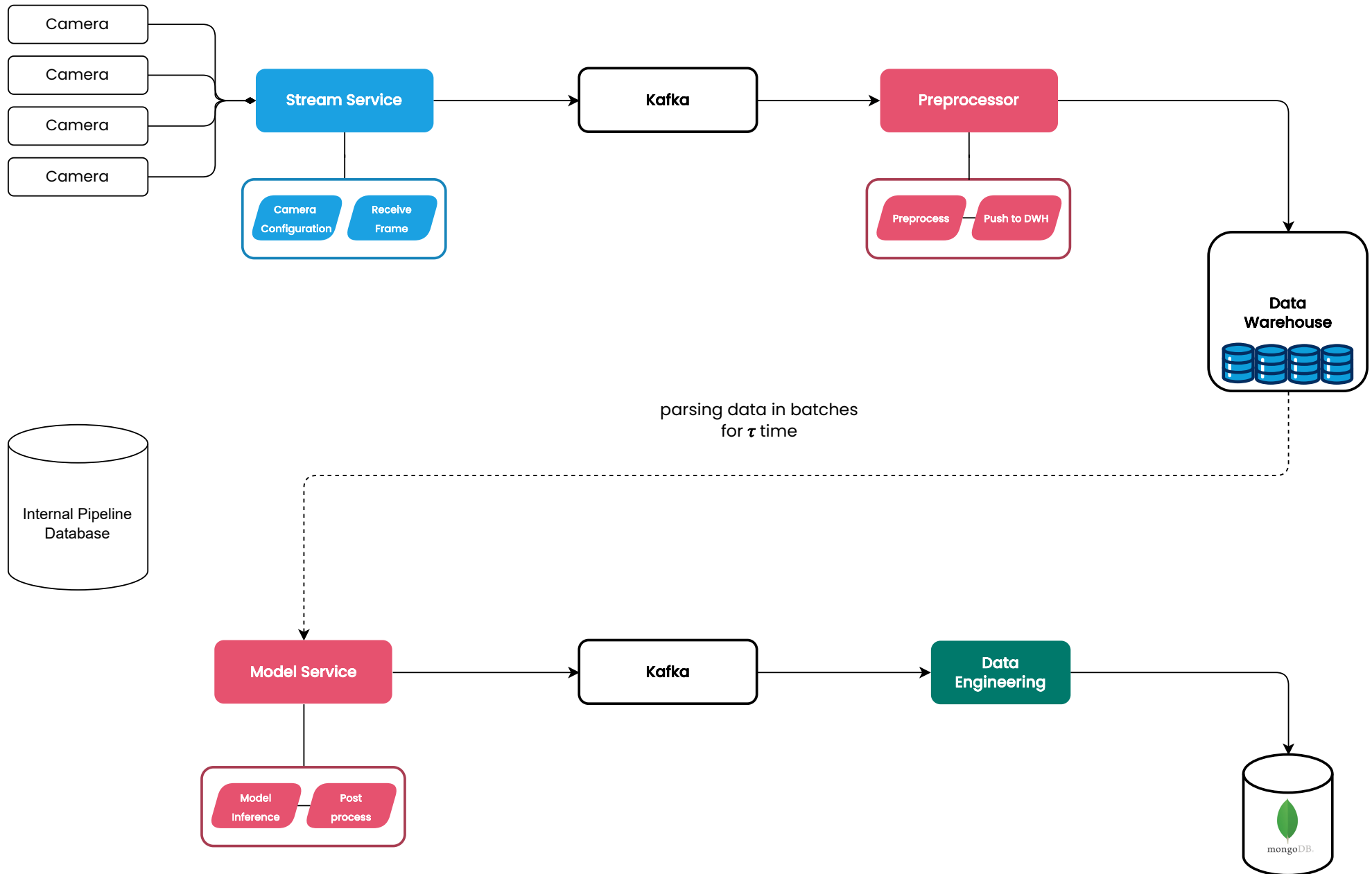
1. DB CRUD development
2. Inference script creation (GPU)
3. **Model compression.**
4. **Post process algorithm design**
5. **Kafka producer development**
6. **Scaling test (vertical/horizontal)**
7. **Logging**
8. **Test and Deploy in DevOps environment**

### Data Engineering

1. Kafka subscriber creation
2. Post ML processing Algorithm creation
3. Cloud DB CRUD creation
4. Scaling Test (vertical/Horizontal)
5. Logging
6. Test and Deploy in DevOps environment

Tazaki vai

## Data Flow Diagram of Pipeline



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## UML diagram of Streaming service

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