Xu Zhusheng

👋 A passionate **software engineer** having **18 years experiences** of building applications with `Python` , `Java` , `JavaScript` .

🤙 **Contact**

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🥷 Skills

- **Languages:** `Python` , `Java` , `JavaScript`
- **Machine Learning**: `NumPy` , `Pandas` , `PyTorch` , `Scikit learn` , `Matplotlib`
- **Backend**: `FastAPI` , `Spring Boot` , `Spring Cloud`
- **Frontend**: `ReactJs` , `Vue` , `Three.js` , `Playwright`
- **Infra-Architecture:** `Redis` , `MySql` , `PostgreSQL` , `MongoDB` , `RabbitMQ` , `Celery` , `Nginx` , `Docker`

🎯 Projects

Data Processing Pipeline - *(November 2024 - Present)*

🏷️ `Python` , `MinIO` , `RabbitMQ` , `MongoDB` , `Celery` , `Docker`

Objective: Load hundreds of thousands CSV files(40MB around per file) from MinIO server, preprocess data and calculate metrics accordingly.

Designed a distributed data processing pipeline to fulfill the objective. The architecture as below:
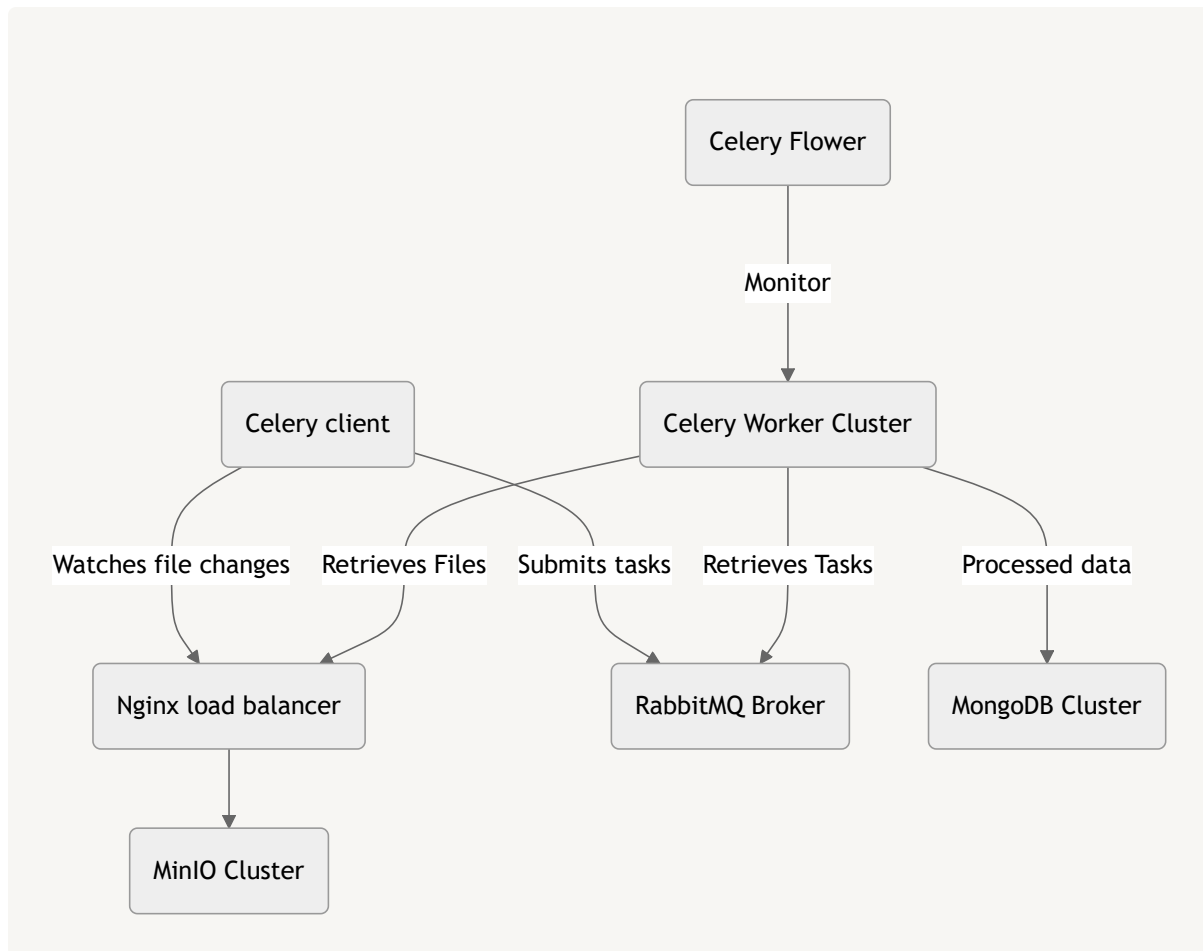
## BIM Lightweight Platform - *(July 2019 - March 2023)*

🏷️ `C#` , `Python` , `FastAPI` , `JavaScript` , `Vue` , `Three.js` , `Redis` , `glTF` , `3D Tiles` , `Docker`

Objective: Reuse BIM models (built by Revit) in variant scenarios - web, AR/VR.

Built following applications :

1. *Exports RVT models to glTF models -* `C#`

2. *Compresses glTF with Draco -* `C++, Draco`

3. *Converts glTF models to 3D tiles models -* `Python`

4. *Web API for viewing glTF and 3D tiles models -* `Javascript, Three.js`

5. *Website for uploading RVT models and viewing glTF models -* `Vue, FastAPI, PostgreSQL`

6. *Connects above applications 1 - 5 with REST API and message queue -* `Python, Redis`

The overall structure and processing flow as below:
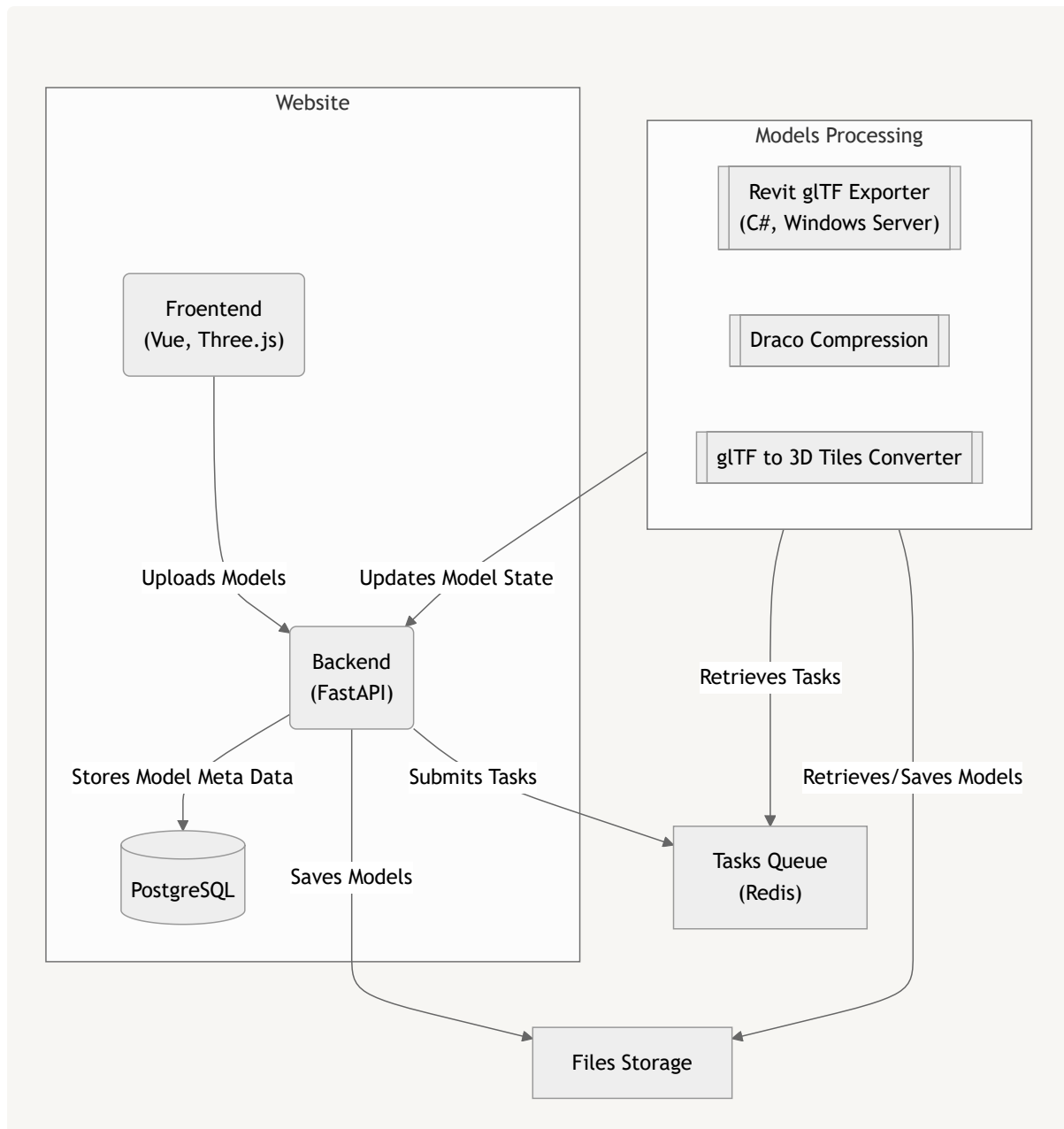
Chronos - *(January 2019 - June 2019)*

👆 `Java` , `Spring Cloud` , `Docker`

Objective: Build a time management app for multi-platform and high concurrency.

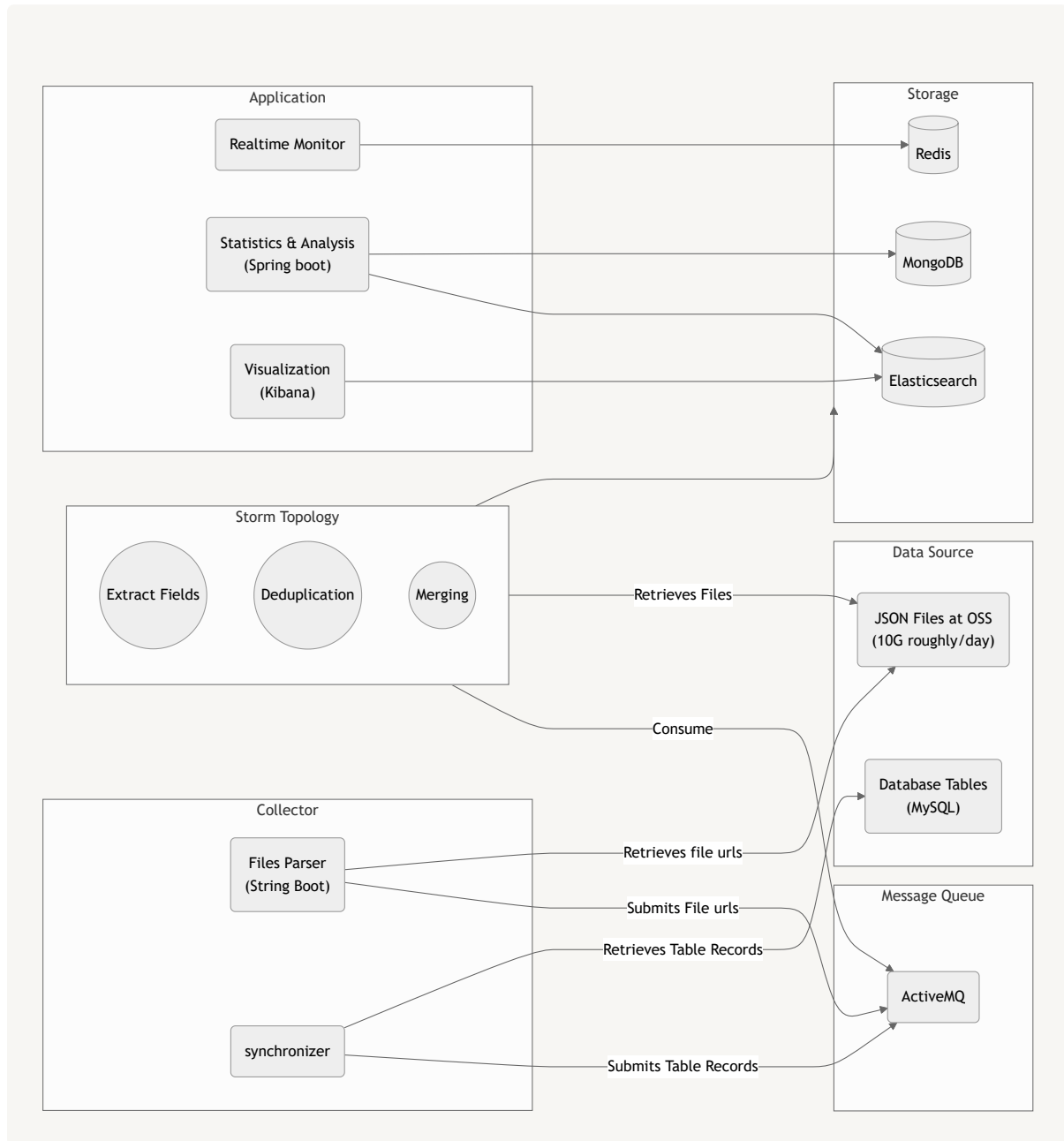Implemented a microservices system architecture.

Data Cleaning Pipeline - *(April 2017 - June 2019)*

`Java` , `Docker` , `Elasticsearch` , `MySQL` , `MongoDB` , `Redis` , `Storm` ,
`ActiveMQ`

Objective: Cleaning data from variant data sources with different formats.

Built a data cleaning pipeline as below:

Application

Realtime Monitor

Statistics & Analysis
(Spring boot)

Visualization
(Kibana)

Storage

Redis

MongoDB

Elasticsearch

Storm Topology

Extract Fields

Deduplication

Merging

Retrieves Files

Consume

Data Source

JSON Files at OSS
(10G roughly/day)

Database Tables
(MySQL)

Collector

Files Parser
(String Boot)

synchronizer

Retrieves file urls

Submits File urls

Retrieves Table Records

Submits Table Records

Message Queue

ActiveMQ

💼 Work Experiences

Shengjie Transportation Technology - *(July 2019 - March 2023)*

Technical Director

- *Delivered a BIM (Building Information Modeling) model lightweight platform.*
- *Delivered 3D/VR applications and company websites.*

Doron Information Technology - *(April 2017 - June 2019)*

Architect

- *Delivered a data cleaning pipeline with Storm.*
- *Built the app "Chronos" with microservices architecture.*

Psychology 001 - *(April 2015 - March 2017)*

Architect

- *Refactored the existing platform with microservices.*
- *Built a full-text search system.*

🌐 Languages

- **Chinese** 🇨🇳 - *Native speaker*

🎓 Education

Guangdong Polytechnic Normal University - *(2001.09 - 2005.07)*

Bachelor's Degree in Computer Science and Technology