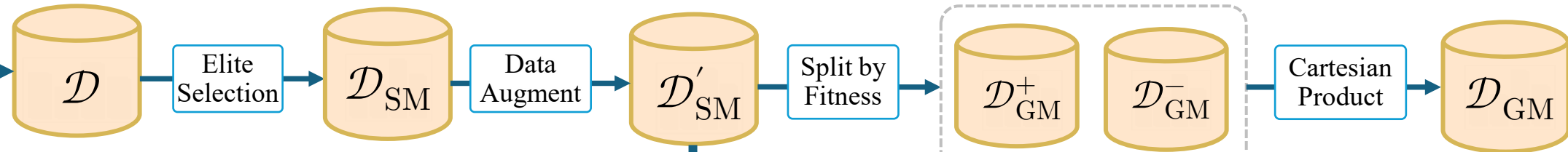
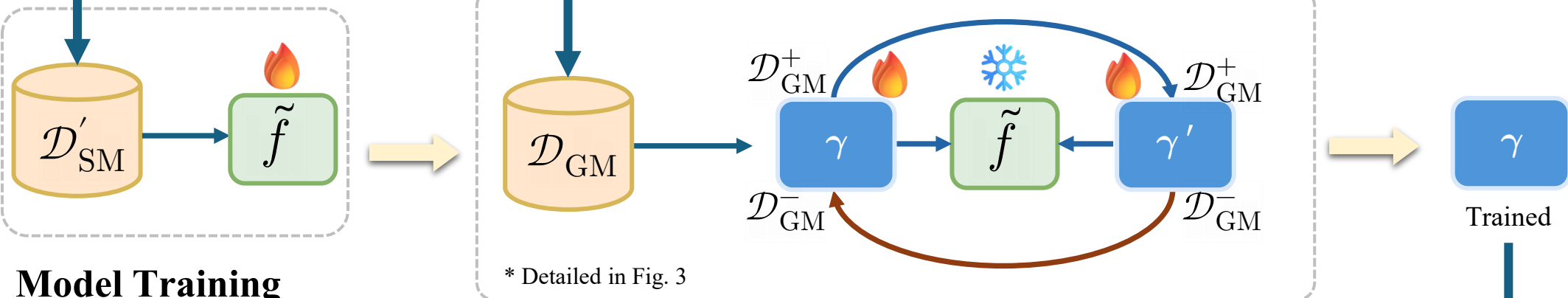


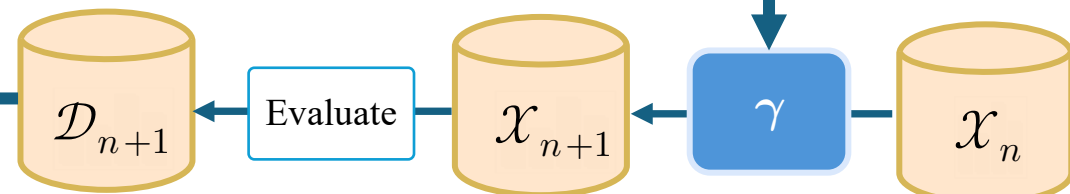
## Data Preparation



## Model Training



## Population Generation



$\mathcal{D}$ : Historical Dataset

$\mathcal{D}_{\text{SM}}$ : High-Quality Dataset

$\mathcal{D}'_{\text{SM}}$ : Surrogate Model Dataset

$\tilde{f}$ : Surrogate Model

$\gamma$ : Regular Generative Model

$\gamma'$ : Pseudo-inverse Generative Model

$\mathcal{D}_{\text{GM}}^+$ : Superior Subset

$\mathcal{D}_{\text{GM}}^-$ : Inferior Subset

$\mathcal{D}_{\text{GM}}$ : Generative Model Dataset

$\mathcal{X}_n$ : Latest Population

: Trainable Module

: Frozen Module