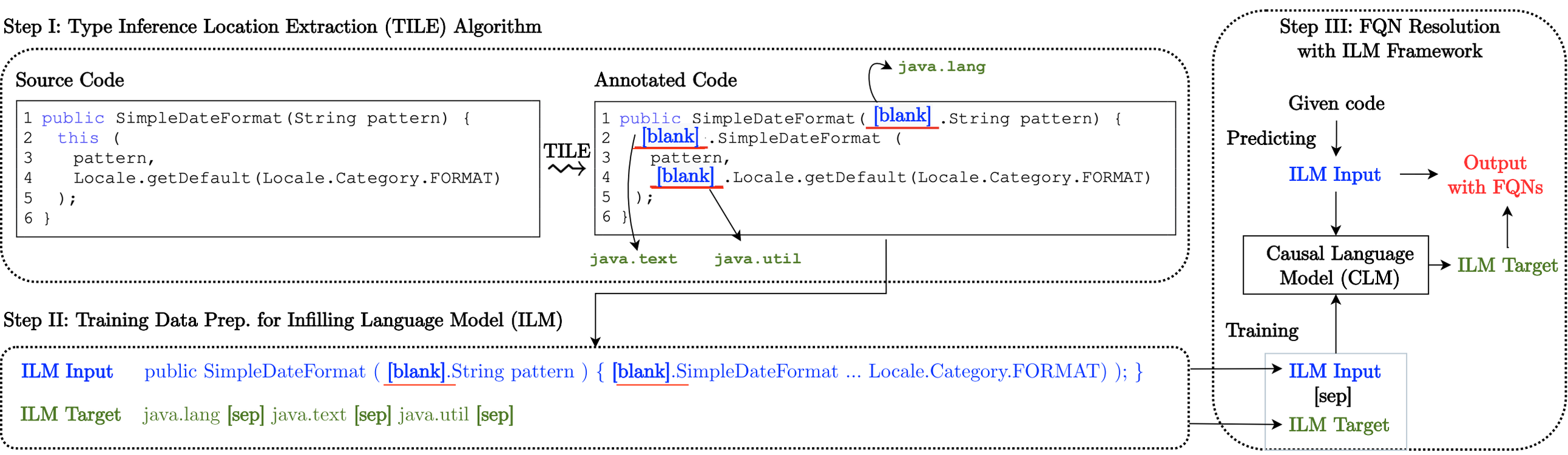
Step I: Type Inference Location Extraction (TILE) Algorithm
Source Code
1 public SimpleDateFormat(String pattern) {
2 this (
3 pattern,
4 Locale.getDefault(Locale.Category.FORMAT)
5);
6 }
TILE
Annotated Code
java.lang
1 public SimpleDateFormat([blank] .String pattern) {
2 [blank] .SimpleDateFormat (
3 pattern,
4 [blank] .Locale.getDefault(Locale.Category.FORMAT)
5);
6 }
java.text
java.util
Step II: Training Data Prep. for Infilling Language Model (ILM)
ILM Input public SimpleDateFormat ([blank].String pattern) { [blank].SimpleDateFormat ... Locale.Category.FORMAT)); }
ILM Target java.lang [sep] java.text [sep] java.util [sep]
Step III: FQN Resolution with ILM Framework
Given code
Predicting
ILM Input
Output with FQNs
Causal Language Model (CLM)
ILM Target
Training
ILM Input [sep] ILM Target