






## Extracted Classes, Methods, Use Cases & Actors

|  Class |  Method(s) |  Use Case |  Actor |  Actor Type |
|---|---|---|---|--|
| <i>MLModule</i>   | <i>preprocess(data),<br/>train(data), predict(input)</i>                                    | <i>Preprocess Data, Train Model, Predict Outcome</i>  | <i>Data Scientist, System</i>   | <i>Primary</i>   |
| <i>MLModel</i>  | <i>train(data),<br/>evaluate(testData)</i>  | <i>Train Model, Evaluate Model</i>  | <i>ML Engineer, Evaluator</i>   | <i>Primary</i>   |
| <i>QuantumCircuit</i>   | <i>defineCircuit(), execute()</i>   | <i>Define Quantum Circuit, Execute Circuit</i>  | <i>Quantum Engineer</i>   | <i>Primary</i>   |
| <i>QuantumModule</i>  | <i>simulate(),<br/>runHybridAI(model)</i>   | <i>Simulate Quantum Process, Run Hybrid AI</i>  | <i>Quantum Developer</i>  | <i>Primary</i>   |
| <i>NLPProcessor</i>   | <i>tokenize(text), classify(text)</i>   | <i>Tokenize Text, Classify Text</i>   | <i>Linguist, NLP User</i>   | <i>Primary</i>   |
| <i>NLPModule</i>  | <i>analyzeText(text),<br/>extractEntities(text)</i>   | <i>Analyze Text, Extract Entities</i>   | <i>Content Analyst</i>  | <i>Primary</i>   |
| <i>AIOrchestrator</i>   | <i>runInference(inputData),<br/>monitorModules()</i>  | <i>Run Inference, Monitor Modules</i>   | <i>Admin, Operator</i>  | <i>Secondary</i>   |
| <i>Result, Status, Prediction, QResult, Entity, Analysis</i>                            | <i>(Data classes: no methods)</i>   | <i>Data exchange/internal flow</i>  | <i>System/Internal</i>  | <i>Secondary</i>   |