Compliance Certification Toolkit – Architecture & Specification

<h1> Compliance Certification Toolkit Architecture &amp; Specification</h1>

<h2> Overview</h2>

<p>The <strong>Compliance Certification Toolkit</strong> evaluates organizational systems and processes for adherence to ethical, regulatory, and risk-based requirements. Inspired by the conscience engine of DharmaAI, this toolkit provides modular certification logic across industries, regulations, and compliance dimensions.</p>

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<h2> Modular Design</h2>

<h3>1. <strong>Compliance Type</strong></h3>

<ul>

<li>Ethical: Fairness, transparency, dignity</li>

<li>Regulatory: Legal obligations (e.g., GDPR, HIPAA)</li>

<li>Risk: Exposure, control resilience, operational risk</li>

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<h3>2. <strong>Target Type</strong></h3>

<ul>

<li>Process (e.g., onboarding, underwriting)</li>

<li>System (e.g., CRM, AI model, database)</li>

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<h3>3. <strong>Industry</strong></h3>

<ul>

<li>Banking</li>

<li>Insurance</li>

<li>Finance</li>

<li>Health</li>

</ul>

<h3>4. <strong>Target Regulation</strong></h3>

<ul>

<li>GDPR</li>

<li>HIPAA</li>

<li>Basel III</li>

<li>ISO 27001</li>

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<h2> Core Components</h2>

<h3> 1. Scroll Engine (<code>scroll\_runner.py</code>)</h3>

<ul>

<li>Loads YAML scrolls with encoded policies</li>

<li>Parses regulation titles, clauses, and applicability</li>

<li>Applies to selected industry/process/system</li>

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<h3> 2. Dharma Fork Evaluator (<code>fork\_evaluator.py</code>)</h3>

<ul>

<li>Generates decision trees (forks) for compliance simulations</li>

<li>Branch logic for compliant vs. non-compliant paths</li>

<li>Links consequences and mitigations</li>

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<h3> 3. Mirror Protocol (<code>mirror\_protocol.py</code>)</h3>

<ul>

<li>Reflects on system/process behaviors</li>

<li>Scores ethical alignment and gaps</li>

<li>Generates audit trace logs</li>

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<h3> 4. Certification Engine (<code>certifier.py</code>)</h3>

<ul>

<li>Aggregates scroll scores, fork decisions, and mirror logs</li>

<li>Produces certification score and report</li>

<li>Issues signed, downloadable PDF</li>

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<h2> User Interface</h2>

<h3>Streamlit UI (<code>streamlit\_app.py</code>)</h3>

<ul>

<li>Dropdowns for compliance type, target type, industry, and regulation</li>

<li>Displays evaluation summary and triggers certification generation</li>

<li>Modular plugin-ready frontend</li>

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<h2> Folder Structure</h2>

<p><code>

compliance-certification-toolkit/

engine/ # Core logic modules

modules/ # Industry, regulation, type-specific configs

scrolls/ # YAML files per regulation

simulations/ # Fork decision logic

reports/ # Generated certification PDFs

app\_ui/ # Streamlit interface

</code></p>

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<h2> Example Certification Output</h2>

<ul>

<li><strong>Score:</strong> 87/100</li>

<li><strong>Status:</strong> Compliant</li>

<li><strong>Findings:</strong> Gaps in data retention documentation</li>

<li><strong>Trace:</strong> Fork path logs + scroll match index</li>

<li><strong>Reflection:</strong> Ethical alignment to fairness and consent principles</li>

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<h2> Future Extensions</h2>

<ul>

<li>Blockchain notarization</li>

<li>Continuous compliance monitoring API</li>

<li>Custom scroll builder for private regulations</li>

<li>Role-based access for auditors, legal teams</li>

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<p><strong>Inspired by DharmaAI. Rooted in conscience. Anchored in compliance.</strong></p>