



ASME V&V 40 · NASA-STD-7009B · ISO 42001 · OPEN SOURCE · APACHE-2.0

# Unit of *Assurance* (UoA)

An open-source way to package *model credibility evidence* — for simulations and AI systems — so a reviewer can verify it without reading 200 pages of prose.

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## THE PROBLEM

Reviewers don't reject your simulation. They reject your evidence package. Standards tell you *what* to assess. Your tools capture *what ran*. Neither captures *why you believe it*, and that's where submissions stall.

### C1 · PACKAGES

#### Decisions as artifacts

Your credibility evidence becomes a portable, signed object you hand a reviewer. Ed25519 + SHA-256. Tool-independent. Tamper-evident.

### C2 · DETECTS GAPS

#### A rule engine for weakeners

Forward-chaining rules catch missing UQ and unsupported claims. Surfaces compound risks no standalone SPARQL query can find.

### C3 · COMPARES

#### Two contexts of use, side by side

When the bar moves, see exactly which factor moved with it. Diff one COU against another in 30 seconds.

```
uofa rules morrison/cou2
```

```
$ uofa rules morrison/cou2.jsonld
```

#### Weakener Detection Report

SUMMARY: 18 weakeners detected

Critical: 9  
High: 7  
Medium: 2

✗ W-PROV-01	[Crit]	7 hits
✗ COMPOUND-01	[Crit]	2 hits
△ W-EP-04	[High]	6 hits
△ W-ON-02	[High]	1 hit
△ W-AL-02	[Med]	1 hit
△ W-CON-04	[Med]	1 hit

✗ 2 compound inferences — chained,  
not detectable by standalone SPARQL

## WHY IT MIGHT FIT YOU

Works in **medical device** (ASME V&V 40), **aerospace** (NASA-STD-7009B), and **AI management systems** (ISO 42001) today. Runs locally, so evidence never leaves your environment. Sits alongside your PLM, SPDM, or model registry — it doesn't replace them.

### ZERO INSTALL

codespaces.new/  
cloutronin/uofa

### ON YOUR MACHINE

pip install uofa  
uofa setup

### WORKED EXAMPLE

uofa.net/demo



SCAN FOR DEMO

**The ask:** Run it on one of your own models — even a small one. Email me what breaks or what's missing.

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uofa.net · [github.com/cloutronin/uofa](https://github.com/cloutronin/uofa)