

## # AI Workflow Orchestration (AWO): A One-Page Method Whitepaper (v1.0)

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**\*\*License:\*\*** CC BY 4.0 (text) · Apache 2.0 (code in this repo)

**\*\*Version:\*\*** 1.0 · **\*\*Date:\*\*** 2025-08-27

**\*\*DOI:\*\*** \_TBD (link to latest tagged release/Zenodo once minted)\_

### ## Abstract

AWO is a lightweight, citable research and build method for human–AI teams. It formalizes roles, artifacts, and governance so outsiders can audit what was claimed, how it was produced, and how to reproduce it. AWO is domain-agnostic: the same scaffolding drives a cosmology case study, a customer analytics pipeline, or an interactive simulator. The goal is not to be “right” on day one but to be **\*\*inspectable, falsifiable, and improvable\*\*** from day one.

### ## Principles (non-negotiables)

1. **\*\*Reproducibility first.\*\*** If it can’t be reproduced, it doesn’t count. Provide runnable quickstarts (e.g., Colab), pinned environments, and data provenance.
2. **\*\*Role separation.\*\*** Use distinct AI roles (Implementer, Refiner, Critic) and human orchestration. Capture critique loops in logs.
3. **\*\*Artifact discipline.\*\*** Every claim ties to artifacts (figures, CSVs, logs) and can be rebuilt via scripts/notebooks.
4. **\*\*Transparency over theatrics.\*\*** Label speculative work. Separate **\*\*Runnable\*\*** from **\*\*Archived\*\***. Keep a changelog.
5. **\*\*Citable anchors.\*\*** Tag releases, mint DOIs, and include a brief whitepaper so others can reference the method itself.

### ## Roles

- **\*\*Orchestrator (human):\*\*** Sets scope, safeguards quality, merges PRs, signs releases.
- **\*\*Implementer (AI/human):\*\*** Produces code, notebooks, drafts.
- **\*\*Refiner (AI/human):\*\*** Improves clarity, structure, performance.
- **\*\*Critic (AI/human):\*\*** Hunts for errors, checks claims against artifacts and standards.

### ## Standard Artifacts

- **\*\*README with Quickstart.\*\*** Minimal steps to reproduce one headline result.
- **\*\*Environment pins.\*\*** `requirements.txt` or lockfile; Colab/PT versions noted.
- **\*\*Run manifests.\*\*** What was run, with parameters and seeds.
- **\*\*Data provenance.\*\*** Sources, checksums, and any preprocessing.
- **\*\*Figures & tables.\*\*** Generated from code, not pasted.
- **\*\*Logs.\*\*** Critique loops, failures, resolutions.
- **\*\*Release tag + DOI.\*\*** Freezes a version that outsiders can cite and audit.

### ## Governance & Workflow

- **\*\*Branching:\*\*** `main` (stable) and feature branches for experiments.
- **\*\*Reviews:\*\*** Merge only after a Critic pass and a working reproduce path.
- **\*\*Versioning:\*\*** Semantic versioning for both method and case studies.
- **\*\*Licensing:\*\*** Code under Apache 2.0; text/images default CC BY 4.0 unless noted.
- **\*\*Citations:\*\*** CITATION.cff + `docs/citation.bib`. All figures link back to build scripts.

### ## Reference Implementations (living case studies)

- **\*\*Waveframe v4.0 (cosmology):\*\*** Stress-tests AWO on speculative theory under strict reproducibility.
- **\*\*Customer Review Analytics:\*\*** End-to-end pipeline from raw text to decision-grade insights with annotation standards.

- **Societal Progress Simulator (planned):** Interactive model demonstrating AWO for simulation and UX.

## ## How to Use This Repo as a Template

1. Fork the repo and keep the folder guarantees: `docs/`, `figures/`, `logs/`, `notebooks/`.
2. Keep a **Quickstart** runnable in a clean environment (Colab or `make reproduce`).
3. Record critique loops in `logs/` and link PRs to claims and artifacts.
4. Tag a release, mint a DOI, and update the DOI badge + this whitepaper's DOI.

## ## Citation

If you use or extend AWO, please cite:

> Wright, S. C. (2025). **AI Workflow Orchestration (AWO): A One-Page Method Whitepaper (v1.0).** GitHub repository: AI-Workflow-Orchestration. DOI: TBD.

## ### BibTeX

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  author = {Wright, Shawn C.},
  year = {2025},
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  doi = {TBD},
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