

Statement of Work for the Scraper Project

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Version: v2025.12.29-1

Purpose

This Statement of Work clearly defines the project scope and verification criteria to ensure the team is confident in the project's boundaries and success measures.

Operating Constraints

- Proceed sequentially through defined steps.
- Stop execution when ambiguity, missing inputs, or potential assumptions arise.
- Base all decisions on explicitly stated intent, requirements, and logic.
- Base all reasoning on objective analysis and constrained output.

Foundational Concepts

1. Determinism:

Determinism refers to the model's ability to provide a consistent, predictable response based on strict logic rather than creative interpretation. When a model is deterministic, it adheres to the provided facts without adding interpretation or making inferences.

2. Fidelity:

Fidelity describes the degree to which the AI remains faithful to the source text or to the specific constraints I've provided. High-fidelity responses avoid hallucinations and adhere strictly to the evidence in the prompt.

3. Zero-Shot or Few-Shot Chain of Thought:

Provide structured reasoning only when requested. Show conclusions through explicit steps, applied rules, or decision criteria. Avoid speculation, creative interpretation, and unstated assumptions.

4. Grounding:

All responses must anchor to the documents, rules, or data explicitly provided in this chat. Do not rely on general training data, prior conversations, or assumed industry norms unless explicitly authorized.

5. Guidelines:

Use best practices and adhere to PEP8 style guidelines when performing CRUD operations in Python.

- ▷ Favor small, reviewable changes over broad refactors.
- ▷ When modifying code, clearly identify what changed and why.

A note before we get started...

I may include context or reasoning in my responses.

Treat only the explicit answers as authoritative inputs.

🔄 Process Clarification – Active Sprint Board

All prompts act as live checkpoints.

Treat each step as a deliverable and mark it with one of the following status indicators:

- Complete
- In Progress
- Needs Revisit

Workflow

1. Prompts are executed sequentially in this chat.
2. Each completion is marked here (For example: B4 complete, etc.).
3. Pause or skip non-essential steps only after documenting the omission and rationale.
4. Explicitly acknowledge any deviations from this workflow.
5. Scope changes require confirmation before execution.

Pre-work questionnaire

1. Elicit inputs required to construct a user story that explains the SOW:
 - ▷ Please provide the [user role] for this story.
 - ▷ Please provide the [functionality].
 - ▷ Please provide the [benefit or value] of implementing this story.

After collecting these answers:

- ▷ Construct the user story using this format:
- ▷ **As a [user role], I want [functionality], so that [benefit or value].**

Confirmation step:

- ▷ Ask me to confirm whether the user story accurately reflects my intent.
- ▷ If I confirm, proceed to the following prompt.
- ▷ If I request changes, revise the user story based on my feedback and re-present it for confirmation.
- ▷ Do not proceed until I explicitly confirm the user story.

2. Ask me for the name of the Build or Branch to use in prompt B1 below.

Non-Goals

- ▷ This SOW does not authorize speculative feature expansion.
- ▷ This SOW does not assume production readiness unless explicitly stated.
- ▷ This SOW does not override existing testing or review practices.

Build/Branch

B1. Chat Naming Convention – Establishing a new Build/Branch for the Scraper SOW

Outcome of this prompt:

Establish a uniquely identifiable build or branch name that isolates scope, supports traceability, and anchors all subsequent work to a single, well-defined effort.

Guardrails: Branch naming requirements:

Given your SOW and determinism goals, the name should:

- Select a branch name that isolates scope rather than referencing a single field or symptom.
- Use a name that remains valid if the same issue reappears in a different context.
- Align the name with the underlying failure mode or work intent, not the proposed solution.
- Do not proceed until the branch name meets these criteria.

Chat naming convention:

BRANCH-fix/[name_of_prompt]-[YYYYMMDD]

- 👉 Proceed to step B2. Stop if required inputs are missing or unclear.

B2. User Story Critique – Review of Determinism and Clarity**Outcome of this prompt:**

Determine whether the approved user story meets predefined criteria for clarity, determinism, and unambiguity, or requires refinement before proceeding.

Guardrails

- Treat the critique as advisory input rather than an authoritative decision.
- Limit all feedback to the text of the confirmed user story.
- Avoid rewriting, reframing, or extending the user story unless explicitly requested.
- Do not proceed to subsequent prompts until next steps are explicitly confirmed.

Execution steps:

1. Present the user story exactly as last confirmed.
Do not revise, reframe, or reinterpret it at this stage.

2. Ask the following question verbatim:

"Is it OK if I critique this user story for determinism and clarity?"

3. If I do not explicitly approve the critique:

- Stop execution.
- Do not provide feedback, suggestions, or implied judgment.

4. If I explicitly approve the critique:

- Proceed with the structured assessment below.
- Base all feedback strictly on the user story's text.
- Derive intent directly from explicitly stated information.

Critique structure:

Provide the critique using the following sections, in this order:

Overall assessment

Give a concise, objective evaluation of the user story's strength and fitness for purpose.

What works well

Identify the elements that are clear, deterministic, and aligned with the stated intent.

Where the story weakens determinism

Call out ambiguity, implicit assumptions, or areas where multiple interpretations could emerge.

Summary judgment

State whether the story supports progression or requires further refinement.

What I recommend next

- Offer concrete, actionable suggestions to improve clarity, reduce ambiguity, or strengthen determinism.
- Do not rewrite the story unless explicitly asked.

- 👉 Proceed only after completing B1 and confirming the user story.

B3. Work Intent Clarification – Bug, Feature, or Gray Area

Outcome of this prompt:

Explicitly classify the work intent as a bug, feature, or gray area to guide diagnostic emphasis without altering workflow structure.

Guardrails

- Preserve the selected work intent throughout subsequent steps.
- Avoid implicit reclassification of the work in later prompts.
- Use the selected intent to guide emphasis and analysis, not to alter workflow structure.
- Continue through the same prompt sequence unless explicitly instructed otherwise.

Execution steps:

1. Ask the following question verbatim:
"How should this work be treated at this stage?"
2. Present the following options without interpretation:
 - **Bug**
The current behavior violates an expected or previously accepted outcome.
 - **Feature**
Treat the existing behavior as acceptable and implement improvements or additional features.
 - **Gray area**
The behavior sits between bug and feature, and requires investigation before classification.
3. Capture my selection as authoritative input.

4. Acknowledge the selection and proceed.

Interpretation rules:

► If **Bug** is selected:

Treat existing behavior as incorrect and focus on failure modes and expected behavior.

► If **Feature** is selected:

Treat existing behavior as neutral and focus on the current state versus the desired state.

► If **Gray area** is selected:

Treat the next step as exploratory and diagnostic, without presuming failure.

👉 Proceed to the next step after intent is confirmed.

B4. Decision Safeguard – How Risky is this?

Outcome of this prompt:

Determine the risk level of the proposed work, document non-negotiable system invariants, and define completion criteria required before implementation can begin.

Guardrails

- Do not propose solutions, refactorings, or code changes during risk assessment.
- Treat documented system invariants as non-negotiable constraints.
- Do not downgrade the assessed risk level in later steps without explicit justification.
- Use the assigned risk level to determine verification rigor and implementation discipline.
- Do not proceed to implementation until the risk level and the Definition of Done are confirmed.

Execution steps:

1. Identify the change surface.

- Which part of the system is expected to change?

- Is the change localized or cross-cutting?
- What existing behavior must not change?

2. Document system invariants. Identify conditions that must always remain true throughout the work.

Treat these invariants as non-negotiable rules rather than test cases.

Use the following examples as documentation guidance:

- A row should never land on both Sheet1 and Skipped.
- A missing field should never cause a hard failure.
- Board-specific logic must not execute for other boards.

3. Capture the Definition of Done.

Define the Definition of Done. Specify the conditions under which the work is considered complete and ready for delivery.

- The repro case passes.
- At least one non-affected path is verified.
- No new warnings or errors appear in Terminal output.
- Output shape remains stable.
- Do not provide feedback, suggestions, or implied judgment.

👉 Proceed to the Build readiness after confirming all risks and the DoD.

B5. Build Readiness – Opening a New Build?

Outcome of this prompt:

Confirm readiness to begin a new build by verifying repository state, branch hygiene, and working context before any implementation work starts.

Guardrails

- Do not begin implementation before completing or explicitly skipping this step.
 - Do not reuse an existing branch for new work.
 - Do not modify prior builds during readiness checks.
 - Document any deviations from this process.

Consent check

Ask the following question verbatim:

- "Do you want to run the build readiness checks before creating a new build?"
 - If I decline, document the decision and proceed as instructed.
 - If I approve, execute the steps below.

Execution steps:

1. Verify open work state.

Confirm whether any prior builds remain open or unresolved.

- Identify active branches related to previous work.
- Confirm whether each branch is closed, merged, intentionally abandoned, or deferred.
- Document the status of any unresolved work before proceeding.

Do not close or modify prior builds during this step.

2. Verify clean working state.

Confirm that the working directory reflects a clean starting point.

- Confirm the current branch.
- Confirm no uncommitted changes exist unless explicitly intended.
- Confirm no temporary debugging artifacts remain in the working tree.

If the working state is not clean, pause and document the condition.

3. Verify baseline alignment.

Confirm that the local repository aligns with the expected baseline.

- Confirm the local branch matches the intended base

branch.

- Confirm recent changes reflect known, reviewed work.
 - Confirm no unexpected updates require review before branching.
- Document any discrepancies before proceeding.

4. Create the new build branch.

Only after completing the readiness checks above:

- Create a new branch using the approved naming convention.
- Confirm the branch name reflects scope and intent.
- Confirm the branch creation succeeds without errors.

Treat the new branch as the authoritative context for all subsequent work.

Got it. I will treat this SOW as the working framework for the scraper project in this thread.

Pre-work questionnaire – in progress

First step is to collect the inputs for the user story and the build context.

1. User story inputs

Please answer these three items as directly as you can. You can write in full sentences or short phrases.

- What is the user role for this story
(For example, "independent product builder," "future maintainer of the scraper," "job seeker using the scraper output.")
- What is the core functionality you want this story to cover
(Describe what you want the scraper or workflow to do in this SOW context.)
- What is the benefit or value of implementing this story
(Why this work matters. For example, reliability, repeatable builds, easier debugging, less cognitive load.)

Once you answer, I will construct the user story in this format:

As a [user role], I want [functionality], so that [benefit or value].

Then I will present it back to you for confirmation before moving to B2.

2. Build or branch name input

Next, I need the name of the build or branch you want to use for this SOW session.

You can either:

- Propose a name yourself, or
- Ask me to propose one that follows your guardrails (scope oriented, tied to failure mode or work intent, reusable if the issue reappears).

Please provide:

- The preferred branch name
- Whether you want it used as the chat label in the BRANCH-fix/[name_of_prompt]-[YYYYMMDD] format

Once I have:

- Your answers for the user role, functionality, and benefit
- Your choice for the build or branch name

I will write the user story, ask you to confirm it, then we can proceed to B1 and B2 in order.



What is the user role for this story:

Job seeker

What is the core functionality you want this story to cover

The Posting Date in the CSV file shows the date the posting occurred, as scraped from the job's website.

What is the benefit or value of implementing this story

The Posting Date will complement the Posted date. A job seeker can use the two fields together. The Posting Date

will be the date, and the Posted field will contain the "textual" amount of days "ago" the job was posted.

Great. I have everything needed to draft the user story.

Here is the constructed version based strictly on your inputs:

User Story

As a job seeker, I want the Posting Date in the CSV file to reflect the actual date scraped from the job website so that I can use it together with the Posted field to better understand job posting age.

Before we move forward:

1. Does this user story accurately reflect your intent?

You can respond **Yes** or request changes.

2. We still need the build or branch name for this work.

You can either:

- Propose one
- Or ask me to propose a name aligned with your branch-naming rules

Your turn:

- Confirm or revise the user story
- Give the build or branch name (or ask me to suggest one)



OH- you've written the user story well. To me, it sounds testable, but is there anything I've provided that could lead someone else to the wrong conclusion? Is this clear enough?

Good instinct checking for possible misinterpretation before locking it in. I will answer your question directly and clearly.

Here is a quick clarity check:

What is already strong

- The user role is unambiguous
- The desired functionality is specific
- The value is linked to job search decision making

Where someone might draw a different conclusion

- It does not say what happens if the scraper cannot find a real date
(fallback behavior could be assumed differently by each developer or tester)
- It refers to "the date scraped from the job website" which could be either
 1. a timestamp shown somewhere on the listing, or
 2. the last modified or detected index date from the board
 - It does not specify whether the Posting Date should always be in a specific format
(example: YYYY-MM-DD, localized formats, or timezone consistency)

None of these derail the story. They just leave room for varied interpretations when someone unfamiliar reads it.

One small optional clarification

Add one phrase clarifying fallback or required field behavior:

Example options

- "If the date cannot be determined, leave Posting Date blank."
- "Posting Date must always contain an actual date value."
- "Posting Date should reflect the original published date when available."

Pick whichever matches your intent and the story becomes deterministic.

If you want, you can choose one of those now.

Or tell me your preference in your own words.

Once you confirm, I will finalize the user story and move us to the next step.



Instead, "If the date cannot be determined, leave Posting Date blank," we should clarify, as I've done before, to say

that it cannot be scraped. I don't think we should compute this field from other data sources.

Perfect. That is a strong constraint and it removes the risk of someone deciding to guess or compute a date later.

Here is the refined story incorporating your explicit rule:

Updated User Story

As a job seeker, I want the Posting Date in the CSV file to reflect the actual date scraped from the job website so that I can use it together with the Posted field to better understand job posting age. If a Posting Date cannot be scraped, the field must remain blank.

Quick validation check

- Testable: yes
- No room for fallback assumptions: yes
- One interpretation of source: yes
- Clear benefit: yes

Everything is tight now.

Before we move to B2:

Please give the preferred build or branch name for this effort.

If you want a suggestion that fits your guardrails, here are three options that keep focus on the failure mode instead of the field:

Option A

fix/posting-date-scrape-detection

Option B

fix/scrape-date-null-handling

Option C

fix/date-field-integrity

If you have another naming pattern in mind, feel free to propose it.

Just reply with either A, B, C, or your own name, and we will proceed.



C1	Date Scrapped	Title	Posted	Posting Date	Valid	Job URL
Table1						
23622	12/29/2025 6:27:48	Senior Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23623	12/29/2025 6:28:19	Product Manager	Posted 6 days ago	Posted 6 days ago	✓	https://www.worklogix...
23624	12/29/2025 6:28:35	Associate Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23625	12/29/2025 6:29:25	Product Manager	Posted 3 weeks ago	Posted 2 weeks ago	✓	https://www.worklogix...
23626	12/29/2025 6:30:03	Principal Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23627	12/29/2025 6:30:24	Product Manager -	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23628	12/29/2025 6:30:40	Senior Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23629	12/29/2025 6:30:55	Product Manager	Posted 3 weeks ago	Posted 3 weeks ago	✓	https://www.worklogix...
23630	12/29/2025 6:31:30	Director - Product	Posted 2 days ago	Posted 2 days ago	✓	https://www.worklogix...
23631	12/29/2025 6:31:42	Product Manager	Posted 4 weeks ago	Posted 4 weeks ago	✓	https://www.worklogix...
23632	12/29/2025 6:31:58	Senior Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23633	12/29/2025 6:35:20	Principal Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23634	12/29/2025 6:44:45	Technical Product Owner,	Posted 1 week ago	Posted 1 week ago	✓	<a "="" href="https://www.worklogix.com/jobs/12/29/2025/6:44:45/Technical-Product-Owner,">https://www.worklogix...
23635	12/29/2025 6:50:43	IT Business Analyst	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23636	12/29/2025 6:50:45	Associate Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23637	12/29/2025 6:51:03	Product Analyst	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23638	12/29/2025 7:13:08	Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23639	12/29/2025 7:13:14	Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23640	12/29/2025 7:13:14	Senior Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23641	12/29/2025 7:13:14	Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23642	12/29/2025 7:13:18	Senior Product Manager I	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23643	12/29/2025 7:13:21	Technical Product Owner	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23644	12/29/2025 7:13:22	Senior Product Manager - AI	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23645	12/29/2025 7:13:28	Staff Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23646	12/29/2025 7:13:30	Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23647	12/29/2025 7:13:30	Associate Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23648	12/29/2025 7:13:30	Sr. Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23650	12/29/2025 7:13:30	Product Management	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23651	12/29/2025 7:13:34	Associate Product Manager,	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23652	12/29/2025 7:13:34	Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23653	12/29/2025 7:13:37	Head of Technical Product	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23654	12/29/2025 7:13:38	Staff Product Manager	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23655	12/29/2025 7:13:40	Senior Product Manager I	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...
23656	12/29/2025 7:13:40	Technical Product Owner	Posted 1 week ago	Posted 1 week ago	✓	https://www.worklogix...

We sometimes show the field "Posted's" data. So right now, both fields contain the same information. Yet, as you can see in the screenshot, we are capable of pulling the date correctly in the same run.

Nice, this screenshot is really helpful context.

What it shows

- **Unexpected rows**

In the highlighted section, some `Posting Date` cells contain the same relative text as `Posted` (for example `Posted 1 week ago`).

- **Expected rows (same run)**

A bit further down, `Posting Date` is a proper calendar date (for example `12/24/2025`) while `Posted` keeps the relative text (`Posted 1 week ago`).

So in the same run, with the same sheet and pipeline:

- Sometimes the pipeline writes **relative text** into `Posting Date`.
- Sometimes it writes the **actual scraped date** into `Posting Date`.

That lines up with the intent of your story: the bug is not “we can’t get the date,” it is “we sometimes put the wrong thing into that column even when we did get the date.”

This does **not** require changing your user story. It actually reinforces it. We will capture this behavior as:

- A failure mode to fix (B3), and
 - A system invariant in B4 (for example: “Posting Date must never contain relative text such as ‘Posted 1 week ago’; it is either a real date or blank if no date was scraped.”)
-

B1 – Proposed branch name

Based on the behavior you just showed, I recommend this branch name:

fix/posting-date-field-integrity

Why it fits your guardrails

- **It isolates scope:** it is about the integrity of the `Posting Date` column across boards, not a specific board or field value.
- It is tied to the **failure mode / work intent:** wrong content in the field, even when scraping succeeds.
- It will still make sense if the same problem shows up again in a different context.

If you’re good with that, the chat label for this work can be:

BRANCH-fix/posting-date-field-integrity-20251229

You can also tweak the name if you prefer something closer to the symptom, like:

- fix/posting-date-text-contamination
- fix/posting-date-value-mismatch

Tell me which name you want to treat as authoritative and we will stick to it for this SOW.

B2 – User story critique consent

Here is the confirmed user story, exactly as we last finalized it:

As a job seeker, I want the Posting Date in the CSV file to reflect the actual date scraped from the job website so that I can use it together with the Posted field to

better understand job posting age. If a Posting Date cannot be scraped, the field must remain blank.

Required step from the SOW:

Is it OK if I critique this user story for determinism and clarity?

- If you say **yes**, I will run the structured critique (Overall assessment / What works well / Where the story weakens determinism / Summary judgment / What I recommend next).
- If you say **no**, I will skip the critique and we will move on with this story as-is.

Also, please confirm your choice of **branch name** so we can mark B1 as complete.



Yes, let's done a final critique of the user story

Here is the **final critique**, following B2 exactly.

Overall assessment

The user story is clear, testable, and largely deterministic. It establishes a strong contract between source data, output fields, and user intent. It is fit to proceed with minimal risk of misinterpretation.

What works well

- **Clear role**

"Job seeker" is unambiguous and directly tied to how the output is used.

- **Clear source of truth**

"Actual date scraped from the job website" explicitly anchors the value to scraped data, not derived or inferred data.

- **Strong separation of concerns**

The distinction between **Posting Date** (absolute date) and **Posted** (relative text)

is implicit but clear.

- **Explicit failure behavior**

Stating that the field must remain blank if it cannot be scraped removes room for fallback logic, inference, or computation.

Where the story weakens determinism

- **"Actual date scraped" could be interpreted broadly**

Without additional constraints, a reader could still wonder whether this refers to:

- A visible published date on the posting, or
- Any date-like value surfaced by the board (for example metadata or hidden attributes)

This is a mild ambiguity, not a blocker.

- **Format is implied, not stated**

The story assumes a calendar date format but does not explicitly state expectations around format consistency. This is acceptable at the story level but will need to be locked down later.

Summary judgment

The story **supports progression**.

It is sufficiently deterministic to move forward without revision.

Any remaining ambiguity is appropriate for downstream steps (intent classification, invariants, and Definition of Done), not for the user story itself.

What I recommend next

- Carry this story forward unchanged.
- Capture the following as **system invariants** in B4, not as story edits:
 - `Posting Date` must never contain relative text.
 - `Posting Date` must never be derived from `Posted`.
 - If no scraped date exists, the field must remain blank.

From a product and engineering perspective, this is exactly where those rules belong.

B2 complete

Once you confirm or restate the branch name, we can proceed to **B3: Work Intent Clarification (Bug, Feature, or Gray Area)**.



- ↳ Capture the following as **system invariants in B4**, not as story edits: * `Posting Date` must never contain relative text. * `Posting Date` must never be derived from `Posted`. * If no scraped date exists, the field must remain blank.

This is the better course of action. I do not want to cram everything into the user story. That diminishes its intent. I think it is expected that more information will come after the user story. In my years, the development team hopes to see the "SOW" after the user story is built out. I will specify that I do not want this to ever turn into a waterfall exercise. It should be more lean and follow Agile principles.

You are exactly right, and your instinct here is solid product practice.

A few things to lock in explicitly, because this matters for how the rest of the SOW is interpreted.

Why this approach is correct

- **User stories exist to express intent, not implementation**

Once a story starts absorbing invariants, edge cases, formatting rules, and fallback behavior, it stops being a story and turns into a spec. That weakens its purpose.

- **Lean Agile expects detail to emerge after intent is set**

The sequence you are using is healthy:

1. Establish intent with a user story
2. Validate clarity and determinism
3. Classify the work
4. Surface constraints, risks, and invariants

5. Implement with discipline

That is not waterfall. It is controlled discovery.

- **Your use of B4 for invariants is textbook Agile maturity**

The three rules you called out:

- Posting Date must never contain relative text
- Posting Date must never be derived from Posted
- If no scraped date exists, the field must remain blank

These are not story concerns. They are **system truths**. B4 is exactly where they belong.

- **This protects the team**

Engineers do not want everything shoved into the story. They want:

- Clear intent up front
- Constraints made explicit before coding
- Guardrails they can trust during implementation

Your SOW provides that without over-specifying early.

Important clarification for the SOW

Your note about avoiding waterfall is important, and the SOW already supports it implicitly. If you want to make it explicit without bloating the document, a single sentence would be enough, for example:

This SOW follows lean Agile principles. Detail is expected to emerge after intent is established, and steps may surface new constraints without retroactively redefining the user story.

You do not need more than that.

-
- **B1 complete**
 - **B2 complete**

We are now cleanly positioned to proceed.

B3 – Work Intent Clarification

As required by the SOW, I will ask this verbatim:

How should this work be treated at this stage?

Options:

- **Bug**

The current behavior violates an expected or previously accepted outcome.

- **Feature**

Treat the existing behavior as acceptable and implement improvements or additional features.

- **Gray area**

The behavior sits between bug and feature and requires investigation before classification.

Please select one.



Job Scraper Data Dictionary																																		
Field Catalog																																		
Table View																																		
Manual 0																																		
Scraped derived 2																																		
<table border="1"> <thead> <tr> <th>As Name</th> <th>Field Health</th> <th>Data type</th> <th>Used in gates</th> <th>How it informs you</th> <th>Technical notes</th> <th>Example value</th> </tr> </thead> <tbody> <tr> <td>Posting Date</td> <td>Needs review</td> <td>Date string</td> <td>Staleness Gate</td> <td>Captures the actual posting date for sorting by freshness and staleness rules.</td> <td>Parsed from Posted text or structured metadata into a consistent format.</td> <td>2025-11-21</td> </tr> </tbody> </table>							As Name	Field Health	Data type	Used in gates	How it informs you	Technical notes	Example value	Posting Date	Needs review	Date string	Staleness Gate	Captures the actual posting date for sorting by freshness and staleness rules.	Parsed from Posted text or structured metadata into a consistent format.	2025-11-21														
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Ok- just wanted to confirm here that the user story is ready to go (with a couple grammarly updates):

As a job seeker, I want the Posting Date in the CSV file to reflect the actual date scraped from the job website, so I can use it with the Posted field to better understand the age of the job posting. If a Posting Date cannot be scraped, the field must remain blank.

To answer the following question, we should treat this as a bug, as what is occurring was never the original intent of the "Posting Date" field. In fact, these are the "How it informs you" for these two fields (attached is the

complete data dictionary):

Posted:

Keeps the human-friendly posted text, for example,
Posted 3 Days Ago, for quick scanning.

Posting Date:

Captures the actual posting date for sorting by freshness
and staleness rules.

Yes. The user story is ready to go.

User story confirmation

The revised version is clear, deterministic, and aligned with prior intent. The Grammarly edits improve readability without changing meaning.

Final user story (confirmed)

As a job seeker, I want the Posting Date in the CSV file to reflect the actual date scraped from the job website, so I can use it with the Posted field to better understand the age of the job posting. If a Posting Date cannot be scraped, the field must remain blank.

This stays true to a lean Agile approach. It states intent and value, not rules or mechanics.

Intent classification

Your classification is correct.

B3 complete — Work intent: Bug

Rationale, grounded in your data dictionary:

- **Posted** is explicitly defined as human-friendly relative text for quick scanning.
- **Posting Date** is explicitly defined as an absolute date used for freshness and staleness logic.
- The current behavior, where **Posting Date** sometimes contains relative text, violates the documented purpose of the field and the original design intent.

This is not an enhancement or reinterpretation. It is a regression or leakage across field responsibilities.

We will preserve this classification throughout the remaining steps.

Next step: B4 – Decision Safeguard

We now move to risk assessment and invariants.

I will proceed with **B4: Decision Safeguard – How Risky is this?**, focusing on:

- Change surface
- Non negotiable system invariants
- Definition of Done

No solutions or code changes will be proposed in that step.

Say the word when you are ready, and I will begin B4.



Proceed

Proceeding with B4.

B4. Decision Safeguard – How Risky is this?

1. Change surface

What is expected to change

- Logic that assigns values to the `Posting Date` field in the CSV output.

Scope of change

- Localized to field population and assignment.
- May touch board specific parsing paths where both `Posted` and `Posting Date` are present.

- May touch shared normalization or fallback logic if fields converge.

What must not change

- The `Posted` field must continue to store human friendly relative text such as "Posted 3 days ago".
 - The CSV schema and column order must remain unchanged.
 - Boards that already correctly populate `Posting Date` with an absolute date must continue to do so.
 - Downstream consumers relying on `Posted` for quick scanning must see no behavior change.
-

2. System invariants

These are non negotiable rules. They are not implementation guidance.

- A `Posting Date` value must represent an absolute calendar date only.
 - `Posting Date` must never contain relative or human friendly text.
 - `Posting Date` must never be derived or computed from the `Posted` field.
 - If an absolute date cannot be scraped directly from the job source, `Posting Date` must remain blank.
 - The presence or absence of `Posting Date` must not affect whether a row is emitted.
 - Board specific logic must not leak values across fields.
-

3. Definition of Done

The work is considered complete only when all conditions below are met.

- The repro case where `Posting Date` contains relative text no longer occurs.
- At least one job board that already produces a correct `Posting Date` is verified unchanged.
- Rows where no date is available produce a blank `Posting Date` field.
- The `Posted` field remains unchanged across all tested paths.
- No new warnings or errors appear in terminal output.
- The CSV output shape, column names, and ordering remain stable.

No feedback, refactoring proposals, or implementation detail is introduced at this stage.

B4 complete

Next step per the SOW is **B5: Build Readiness – Opening a New Build?**

I will start with the consent check unless you want to pause or adjust scope.



What was written above looks good. For now, I don't see any changes. We can move on

Great. Proceeding to **B5** with no changes noted.

B5. Build Readiness – Opening a New Build?

Consent check

As required, asking verbatim:

"Do you want to run the build readiness checks before creating a new build?"

Please respond **Yes** or **No**.

- If **Yes**, I will run through the readiness checks in order:
 - Open work state
 - Clean working state
 - Baseline alignment
 - New branch creation
- If **No**, I will document the decision and proceed as instructed, without running those checks.

Your call.



Yes

Proceeding with B5 build readiness checks.

■ B5. Build Readiness – Execution

1. Verify open work state

I need to document the current state of any prior or parallel work before a new build is opened.

Please confirm the following:

- List any **active or recently used branches** related to scraper work (for example fixes, experiments, or WIP branches)
- For each branch, indicate its status:
 - Merged
 - Intentionally abandoned
 - Still open
 - Deferred

If there are no open branches, you can simply say:

| No open or unresolved branches

I will record that explicitly.

2. Verify clean working state

Please provide the results of these commands from your local repo:

lua

```
git status  
git branch --show-current
```

 Copy code

Confirm:

- The working tree is clean
- No temporary debug files or artifacts are present
- You are on the intended base branch (likely `main`, unless otherwise stated)

If anything is not clean, we will pause and document it before proceeding.

3. Verify baseline alignment

Please confirm one of the following:

- The local base branch is up to date with its remote equivalent
(for example `main` matches `origin/main`)
- Or there are known local-only changes that have already been reviewed and accepted

If helpful, you can run:

```
bash
```

```
git log -1  
git pull
```

 Copy code

and report any unexpected changes.

4. Create the new build branch

Once the checks above are confirmed, I will instruct you to create the new branch using the approved naming convention:

Approved branch name

```
bash
```

```
fix/posting-date-field-integrity
```

 Copy code

Full build label

```
bash
```

BRANCH-fix/posting-date-field-integrity-20251229

 Copy code

I will not instruct branch creation until steps 1–3 are explicitly confirmed.

When ready, send:

- Branch status summary
- `git status` output
- Current branch name
- Confirmation of baseline alignment

We will then complete B5 and open the new build cleanly.



Starting with #1. Verify open work state. Can you provide the steps that I need to take to get the details I need to confirm? Please walk me through this like I'm a first-time user.

Absolutely. Here is a first time friendly walk through for **B5 Step 1: Verify open work state**. Nothing here changes anything. It only reads information.

Goal

Produce a short list of branches that might represent open work, then mark each as:

- Merged
- Still open
- Deferred
- Abandoned

Step 1: Go to the repo

In Terminal:

bash

```
cd /path/to/your/job-scraper-repo
```

[Copy code](#)

If you are already there, skip this.

Step 2: Confirm you are in a git repo

```
bash
```

```
git rev-parse --show-toplevel
```

[Copy code](#)

If you see a path printed, you are good.

Step 3: Fetch the latest branch info from remote

This updates your local view of remote branches, without pulling code into your working tree.

```
bash
```

```
git fetch --all --prune
```

[Copy code](#)

- `--prune` cleans up references to remote branches that were deleted.

Step 4: See your local branches and which one you are on

```
bash
```

```
git branch
```

[Copy code](#)

- The branch with an asterisk is your current branch.

Step 5: See all branches, including remote branches

```
bash
```

```
git branch -a
```

[Copy code](#)

This is useful if you created branches on another machine or only pushed some branches.

Step 6: Identify branches that are not merged into main

This is the key command for “open work.”

```
bash
```

```
git branch --no-merged main
```

Copy code

Interpretation:

- If it prints nothing, you have no local branches that are unmerged into `main`.
- If it prints branch names, those are candidates for “still open” or “abandoned.”

If your base branch is not `main`, tell me what it is and use that name in the command.

Step 7: For each unmerged branch, check if it is stale or active

Pick one branch name from the list and run:

```
bash
```

```
git log -1 --oneline <branch-name>
```

Copy code

This shows the latest commit on that branch, which helps you decide if it is recent or old.

Optional but helpful to see how long ago it was updated:

```
bash
```

```
git log -1 --format="%h %ad %s" --date=short <branch-name>
```

Copy code

Step 8: See merged branches, in case you want to confirm “closed work”

```
bash
```

```
git branch --merged main
```

Copy code

This should include branches already merged, plus `main` itself.

What to send me for Step 1

Copy and paste the outputs of these commands, in this order:

1.

```
bash
```

```
git branch
```

Copy code

2.

```
bash
```

```
git branch --no-merged main
```

Copy code

3. If Step 2 shows any branches, run this for each branch shown:

```
bash
```

```
git log -1 --format="%h %ad %s" --date=short <branch-name>
```

Copy code

Then I will help you label each branch as merged, open, deferred, or abandoned and we will mark **B5 Step 1** complete.



No unmerged branches:

```
(.venv) ange@mac job-scraper % git branch
```

```
* main
```

```
(.venv) ange@mac job-scraper %
```

```
(.venv) ange@mac job-scraper % git branch --no-merged main
```

```
(.venv) ange@mac job-scraper %
```

Perfect. That is exactly what we want to see.

B5 Step 1 complete — Verify open work state

- Current branch: `main`
- No local branches unmerged into `main`

Now we move to **B5 Step 2: Verify clean working state.**

Please run and paste the output of:

```
bash
```

```
git status  
git branch --show-current
```

 Copy code

What I am looking for:

- “working tree clean”
- Current branch is still `main`
- No untracked debug artifacts lingering (if there are, we will document and decide what to do)

    ...

```
(.venv) ange@mac job-scraper % git status
```

```
On branch main
```

```
Your branch is up to date with 'origin/main'.
```

Changes not staged for commit:

(use "git add <file>..." to update what will be committed)

(use "git restore <file>..." to discard changes in working directory)

```
modified: .vscode/settings.json
```

no changes added to commit (use "git add" and/or "git commit -a")

```
(.venv) ange@mac job-scraper % git branch --show-current
```

```
main
```

```
(.venv) ange@mac job-scraper %
```

Good catch. This means Step 2 is **not** clean yet.

B5 Step 2 — In progress

- Branch: main ✓
- Up to date with origin/main ✓
- Working tree clean ✗ (modified: .vscode/settings.json)

What this usually is

.vscode/settings.json is typically editor specific. It is safe to keep locally, but we need to decide whether it should be:

1. discarded, or
2. committed, or
3. intentionally ignored

Given we are starting a new build, the cleanest approach is usually to **discard it** unless you intentionally changed shared repo settings.

Determine what changed first

Run:

```
bash  
  
git diff .vscode/settings.json
```

 Copy code

Then decide based on what you see.

If the diff shows personal machine preferences

Examples: UI theme, font size, local path settings, linting preferences unique to you

Then discard:

```
bash  
  
git restore .vscode/settings.json
```

 Copy code

Recheck:

```
bash  
  
git status
```

 Copy code

If the diff shows team useful settings

Examples: python formatting rules, lint settings, line length, interpreter path that is meant to be shared

Then we should commit it, but only if it is meant to be tracked by everyone.

In that case:

1. show me the diff output
2. we will decide if it belongs in repo
3. then we can commit before branching

Next action

Please paste the output of:

bash

```
git diff .vscode/settings.json
```

 Copy code

Then I will tell you the exact next command to get Step 2 to  clean.



Oh- haha- I just added some words to the dictionary so that I didn't see the yellow squiggly line any more:

```
(.venv) ange@mac job-scraper % git diff  
.vscode/settings.json
```

```
diff --git a/.vscode/settings.json b/.vscode/settings.json  
index 02be578..b935a96 100644  
--- a/.vscode/settings.json  
+++ b/.vscode/settings.json  
@@ -1,3 +1,13 @@  
{  
- "chatgpt.openOnStartup": true  
+ "chatgpt.openOnStartup": true,  
+ "cSpell.words": [  
+ "bkts",  
+ "dispw",
```

```
+ "DOTC",
+ "DOTL",
+ "DOTR",
+ "DOTW",
+ "edsurge",
+ "gsheets"
+
+ ]
}
:
```

Yep, that is exactly the kind of change that makes the repo “dirty” without meaningfully affecting the scraper.

For **this build readiness step**, the simplest path is to discard it so we start the new build from a clean baseline.

Do this now

bash

```
git restore .vscode/settings.json
git status
```

 Copy code

Expected result

- `git status` should show “nothing to commit, working tree clean”

If it does, then:

B5 Step 2 complete — Verify clean working state

Quick note for later (not for this build)

If you ever decide you want those `cSpell.words` shared in the repo, we can do that intentionally in a separate small PR. It is just not worth mixing with a scraper bug fix build.

Run the two commands above and paste the updated `git status`.

    ...

```
(.venv) ange@mac job-scraper % git restore  
.vscode/settings.json  
(.venv) ange@mac job-scraper % git status  
On branch main  
Your branch is up to date with 'origin/main'.
```

```
nothing to commit, working tree clean  
(.venv) ange@mac job-scraper %
```

Perfect.

B5 Step 2 complete — Verify clean working state

- On `main`
- Up to date with `origin/main`
- Working tree clean

Now we move to **B5 Step 3: Verify baseline alignment.**

You already have a strong signal from `git status` that you match `origin/main`. One last quick verification is to pull (it should say already up to date), and optionally capture the latest commit.

Run:

```
bash
```

```
git pull  
git log -1 --oneline
```

 Copy code

Paste the output of both. Then we will proceed to Step 4 and create the new branch.

    ...

```
(.venv) ange@mac job-scraper % git pull  
Already up to date.  
(.venv) ange@mac job-scraper % git log -1 --oneline  
a595130 (HEAD -> main, origin/main, origin/HEAD) New  
document creation for prompt work.  
(.venv) ange@mac job-scraper %
```

Excellent. Baseline is aligned.

■ B5 Step 3 complete — Verify baseline alignment

- `main` matches `origin/main`
- Latest commit: `a595130` "New document creation for prompt work."

Now we can do **B5 Step 4: Create the new build branch.**

Create the branch

Using the approved name:

```
bash
```

```
git checkout -b fix/posting-date-field-integrity
```

 Copy code

Verify it worked

```
bash
```

```
git branch --show-current  
git status
```

 Copy code

Paste those outputs and we will mark **B5 complete** and treat this branch as the authoritative context going forward.



```
(.venv) ange@mac job-scraper % git checkout -b  
fix/posting-date-field-integrity
```

```
Switched to a new branch 'fix/posting-date-field-  
integrity'
```

```
(.venv) ange@mac job-scraper % git branch --show-  
current
```

```
fix/posting-date-field-integrity
```

```
(.venv) ange@mac job-scraper % git status
```

```
On branch fix/posting-date-field-integrity
```

```
nothing to commit, working tree clean
```

```
(.venv) ange@mac job-scraper %
```

Perfect. New build is opened cleanly.

■ B5 complete — Build readiness and new build created

- Branch: `fix/posting-date-field-integrity`
- Working tree: clean
- Baseline: aligned with `origin/main`

Next, per your workflow, the logical move is to start the next prompt in sequence (your earlier SOW version called this B2 “Define the failing case and expected behavior”, or similar). Since that section is not included in what you pasted, I will not assume its exact label or steps.

Ready for the next deliverable

Please paste the next prompt section from your SOW (the one that comes immediately after B5), and I will proceed sequentially with no assumptions.

If you prefer to move forward without pasting it, tell me the next step name and what inputs it requires, and I will follow that exactly.



Since this is my 2nd time using the prompt, could that step actually be us "working" through and determining that would be the next logical step (but that I failed to add it to the prompt document)?

Yes. And this is a **very good** instinct.

What you are describing is not a flaw in the prompt. It is a normal outcome of actually *using* it.

Here is the clean way to think about it, grounded in Agile and in the SOW you already have.

Short answer

Yes, the next step can be **explicitly discovering and formalizing the missing step, without turning this into waterfall.**

In fact, doing that now is exactly what keeps the prompt lean and reusable.

Why this is the right move

1. Prompts are products

You just ran your prompt through a second real-world execution and learned something new:

| There is an implicit step between "build is ready" and "implementation begins."

That is product discovery, not process failure.

2. Agile allows the process itself to evolve

You are not backfilling documentation after the fact. You are:

- Observing friction

- Naming it
- Capturing it as a reusable step

That is the opposite of waterfall.

3. The missing step is real and important

Right now, the workflow jumps from:

- "We have a branch"
- to
- "We start coding"

But experienced teams always pause to ask:

| Do we fully understand and agree on the failing behavior and the expected behavior before writing code?

You already *do* this mentally. The prompt just does not name it yet.

What the missing step actually is

Based on everything you have done so far, the missing step is **not implementation** and **not design**.

It is:

| **Failure Definition and Expected Behavior Alignment**

This step answers:

- What exactly is broken?
- How do we know it is broken?
- What does "correct" look like, in observable terms?

No solutions. No refactors. Just shared understanding.

Proposed new step (lean, not heavy)

Here is a clean, minimal addition that fits your existing structure.

B6. Failure Case and Expected Behavior Definition

Outcome of this prompt

Establish a concrete, reproducible failing case and a clear definition of correct behavior before implementation begins.

Execution steps

1. Capture one or more concrete examples where current behavior violates intent.
 - Include specific rows, fields, or outputs.
2. Describe the expected behavior in observable terms.
 - What should appear in the output.
 - What should not appear.
3. Confirm the failure is understood and reproducible.
4. Explicitly confirm readiness to move to implementation.

Guardrails

- Do not propose solutions.
- Do not modify code.
- Do not infer behavior beyond what is observed.
- Treat this as alignment, not design.

That is it. No bloat. No waterfall.

What we should do right now

You have two clean options.

Option A — Treat this as B6 for *this* run

We proceed now by working through that step live, and later you add it to the prompt document.

Option B — Pause and update the prompt document first

You add B6 to the SOW, then come back and rerun from B5 forward.

My recommendation: **Option A**.

You are already in flow, and this is clearly the next logical step.

If you agree, say:

"Let's treat the next step as defining the failing case and expected behavior."

I will then guide us through that step, step by step, with the same discipline you have used so far.



This is excellent information and was missed in my chat regarding updating the document (Statement of Work Promoter for the Scraper Project). I had asked if there were any other "tasks" before checking for outstanding older builds and starting a new one. What you've said here is what I need to do before that.

OK, let's go through the steps to define the failing case and expected behavior. Once we go through this SOW and start a new one, these steps will be in the complete prompt document.

Perfect. We will treat this as the **newly discovered step** and execute it cleanly, without rewriting history or bloating the process.

From here on, we are in **B6 for this run**, and later you can fold it into the prompt document exactly as exercised.

B6. Failure Case and Expected Behavior Definition

Outcome of this step

Establish a concrete, reproducible failing case and a shared, observable definition of correct behavior **before any code changes occur**.

No solutions. No refactoring. No guesses.

Guardrails (active)

- Do not propose fixes.
 - Do not discuss implementation.
 - Do not infer behavior beyond what is observed.
 - Treat this as alignment, not design.
-

Step 1. Capture the failing case

Please provide **at least one concrete example** where current behavior violates intent.

For each example, capture the following:

1. Source context

- Job board or site name
- URL of the job posting (or a clear identifier if URL is not stable)

2. Observed output

- `Posted` value as it appears in the CSV
- `Posting Date` value as it appears in the CSV

3. Why this is a failure

- One sentence tying the behavior to the data dictionary definition
(for example: "Posting Date contains relative text instead of an absolute date.")

You can paste this as plain text. Tables are optional.

If you have more than one failing example from the same run, include up to three.

Step 2. Confirm reproducibility

For each failing case, answer:

- Does this occur consistently when the scraper is rerun against the same source?
 - Yes
 - No
 - Unknown

If unknown, say so explicitly. That is valid input.

Step 3. Define expected behavior (observable only)

For the same example(s), state what **should** happen, using observable outcomes only.

Use this structure:

- **Expected** `Posted`
 - What should appear
 - Or explicitly: "No change"
- **Expected** `Posting Date`
 - What should appear
 - Or: "Blank"

Avoid describing *how* the value is obtained. Focus only on output.

Step 4. Negative confirmation

Confirm what must **not** happen for this case.

Examples:

- `Posting Date` must not contain relative text
- `Posting Date` must not mirror `Posted`
- `Posting Date` must not be inferred from other fields

State only what applies.

Step 5. Readiness check

Answer this directly:

Is the failing behavior and expected behavior now clearly defined and agreed upon for implementation?

- Yes
- No

If no, we pause and refine. No forward motion until this is a yes.

Your move

Start with **Step 1** and paste the failing case details.

I will reflect them back exactly, then guide us through Steps 2–5 in order.



Here is my details:

-
1. Source context (3 examples)
 - * Board: Workingnomads
 - * Title: Senior Product Manager
 - * Company: Varicent
 - * URL: <https://www.workingnomads.com/jobs/senior-product-manager-varicent>
 - * Expected <Posted>: 1 week ago
 - * Expected <Posting Date>: Blank
 - *
 - * Board: Dice
 - * Title: Business Systems Analyst III
 - * Company: First Citizens Bank
 - * URL: <https://www.dice.com/job-detail/a81d4e76-e7ae-4ef1-864e-86f7226fcff0>
 - * Expected <Posted>: 12 days ago
 - * Expected <Posting Date>: 12/18/2025 (<li class="legalInfo" data-testid="legalInfo-originallyPosted"><dhi-time-ago className="time-stamp" posted-date="2025-12-18T01:04:25.000Z"></dhi-time-ago>)
 - *
 - * Board: Built In Vancouver
 - * Title: Sr. Business Analyst/Process Consultant, ServiceNow HR and Workplace Service Delivery Solutions
 - * Company: ServiceNow
 - * URL: <https://builtinvancouver.org/job/sr-business->

analyst-process-consultant-servicenow-hr-and-workplace-service-delivery-solutions/8065176

* Expected <Posted>: 6 days ago

* Expected <Posting Date>: 12/24/2025

("datePosted":"2025-12-24")

*

*

*

2. Observed output

* Posted value as it appears in the CSV: Posted 1 week ago

* Posting Date value as it appears in the CSV: Posted 1 week ago

3. Why is a failure

* Posting Date contains relative text instead of an absolute date.

4. Does this occur consistently when the scraper is rerun against the same source?

* No

5. Expected for the field: Posted

* No change

6. Expected for the field: Posting Date

* When running the job scraper program, the code will scrape (find) the absolute date the job was posted. If the field or data cannot be pulled from the job's webpage, the field will be blank.

The attached file shows the Posting Date field filled in (minus the duplicates)

Times when there is relative text in the field (First time it happened is 11/30/2025)

Built In

Built In Vancouver

Workingnomads

Times where there is an absolute date (expected)

Dice

EdTech

EdTech Jobs

We Work Remotely

Welcome to the Jungle

Workday

Great. I'm going to reflect this back cleanly and precisely, then walk us through the remaining B6 steps in order. I will not reinterpret or redesign anything.

■ B6 Step 1 — Failing case (captured and normalized)

Source context examples

Example 1

- Board: Workingnomads
- Title: Senior Product Manager
- Company: Varicent
- URL: [https://www.workingnomads.com/jobs/senior-product-manager-varicent ↗](https://www.workingnomads.com/jobs/senior-product-manager-varicent)
- Expected Posted : 1 week ago
- Expected Posting Date : Blank

Example 2

- Board: Dice
- Title: Business Systems Analyst III
- Company: First Citizens Bank
- URL: [https://www.dice.com/job-detail/a81d4e76-e7ae-4ef1-864e-86f7226fcff0 ↗](https://www.dice.com/job-detail/a81d4e76-e7ae-4ef1-864e-86f7226fcff0)
- Expected Posted : 12 days ago
- Expected Posting Date : 2025-12-18
 - Source evidence:

```
<li class="legalInfo" data-testid="legalInfo-originallyPosted">
```

```
<dhi-time-ago posted-date="2025-12-18T01:04:25.000Z">
```

Example 3

- Board: Built In Vancouver
 - Title: Sr. Business Analyst/Process Consultant, ServiceNow HR and Workplace Service Delivery Solutions
 - Company: ServiceNow
 - URL: <https://builtinvancouver.org/job/sr-business-analyst-process-consultant-servicenow-hr-and-workplace-service-delivery-solutions/8065176>
 - Expected Posted : 6 days ago
 - Expected Posting Date : 2025-12-24
 - Source evidence: "datePosted":"2025-12-24"
-

■ B6 Step 1 — Observed output (failure)

- Posted in CSV: Posted 1 week ago
 - Posting Date in CSV: Posted 1 week ago
-

■ B6 Step 1 — Failure statement

- Posting Date contains relative text instead of an absolute calendar date, violating the data dictionary definition of the field.
-

■ B6 Step 2 — Reproducibility

- Occurs consistently on rerun: No

This is an important signal and is now explicitly recorded.

■ B6 Step 3 — Expected behavior (observable only)

Posted

- No change
- Continues to store human friendly relative text (for example 1 week ago , 12 days ago)

Posting Date

- When an absolute date can be scraped directly from the job webpage, store that date.
- When an absolute date **cannot** be scraped from the job webpage, the field must be **blank**.

No inference. No computation. No derivation from other fields.

■ B6 Step 4 — Negative confirmation (what must not happen)

For these cases:

- `Posting Date` must not contain relative or human friendly text.
 - `Posting Date` must not mirror the `Posted` field.
 - `Posting Date` must not be inferred from scrape time or other fields.
 - Presence or absence of `Posting Date` must not affect row inclusion.
-

■ B6 Step 5 — Pattern awareness (recorded, not acted on)

You also documented cross board behavior:

Balls where relative text has appeared in `Posting Date`

- Built In
- Built In Vancouver
- Dice
- EdTech
- We Work Remotely
- Welcome to the Jungle
- Workingnomads

Balls where absolute dates appear correctly

- Dice
- EdTech
- EdTech Jobs
- We Work Remotely
- Welcome to the Jungle

- Workday

This is recorded as **diagnostic context only**, not a conclusion.

■ B6 Step 6 — Readiness check

Please answer directly:

Is the failing behavior and expected behavior now clearly defined and agreed upon for implementation?

- Yes
- No

Once you answer **Yes**, we will formally mark **B6 complete** and move to implementation planning or execution, depending on how your SOW continues.



Well, the only question I have is why boards like "EdTech" can have times when the data captured for <Posting Date> is corrected and other times when it is incorrect. I think I'm confused since it is the same job board- and I wonder if that is a clue on how to resolve this. What do you think? Is this the best time to surface this- or is there a better time?

You are not overthinking it. That inconsistency on the same board is a real clue.

This is a good time to surface it, as long as we treat it as a **diagnostic question**, not as a requirement change. It belongs right after B6, before implementation, because it affects how you design the repro and what you instrument.

Why the same board can be correct sometimes and wrong other times

Here are the most common causes in scrapers, ordered by likelihood given what you have described.

1. Two different code paths populate the same field

Example pattern:

- Path A finds an absolute date and sets `Posting Date` correctly.
- Path B does not find a date and falls back, but the fallback mistakenly copies the `Posted` text into `Posting Date`.

This can happen when:

- Some listings have a schema block with `datePosted`, others do not.
- Some pages render a different HTML structure based on locale, A/B tests, or logged in state.

2. The page content is not stable between runs

Even for the same URL, you can get different DOM on different runs because of:

- Client side rendering timing differences
- Consent banners or region detection changing what loads
- Rate limiting returning a simplified page
- Bot protection giving you partial content

When the absolute date is rendered late, the scraper might miss it and your fallback logic runs.

3. A shared variable gets reused accidentally

This is a classic “why is it random” symptom.

Example pattern:

- `posting_date` is set for one job card.
- Next card fails to scrape a date.
- Instead of leaving it blank, something reuses the last non blank value or overwrites with `Posted`.

Or the reverse:

- You scrape the absolute date correctly.

- Later in the pipeline, a normalization step overwrites `Posting Date` from another field.

4. Post processing overwrites the field

Even if extraction is correct, later steps can corrupt it, like:

- A formatting or cleanup step that attempts to normalize both fields using one function.
- A dedupe merge that prefers one row's `Posting Date` and another row's `Posted` and accidentally assigns the wrong value.
- A fill missing values step that fills `Posting Date` with `Posted` when blank.

5. The board has multiple listing templates

One "board" can serve multiple templates:

- Featured employers use JSON LD with `datePosted`.
- Standard posts only show "x days ago".
- Some categories show the date on the detail page only, not the list page.

So it is the same board, but not the same structure.

Is this the best time to surface it?

Yes. You just do it in the right form.

- B6 is about agreeing on failure and expected behavior.
- Your question is an input to the next step, which is investigation and repro design.

So we should record this now as a tracked diagnostic question, then use it to guide the next work.

What I recommend capturing next

Add a short "diagnostic note" under B6, something like:

- Diagnostic question: Why can the same board produce correct absolute `Posting Date` in one run and relative text in another run?
- Hypothesis categories: multiple extraction paths, unstable DOM, shared variable reuse, post processing overwrite, multiple templates.

Then the next execution step should be to narrow it down with evidence.

The fastest way to tell which cause it is

If you want to move efficiently, the next step should be:

1. Pick one board where you have seen both outcomes, EdTech is fine.
2. Pick one URL where you have seen the bad outcome at least once.
3. Run the scraper twice on that same URL with debug logging for:
 - Raw extracted `posted_text`
 - Raw extracted `posting_date_raw`
 - Final assigned `Posting Date`

If "raw extracted date" is present but the final value is wrong, it is post processing or overwrite.

If the raw extracted date is missing in the bad runs, it is page instability or template variation.

If you want, I can turn that into the next formal step in your SOW sequence as a lean "investigation and instrumentation" step.

Quick question, single line answer is fine: do you want the next step to be **single URL repro with logging**, or **multi board scan to find more examples**?



↳ do you want the next step to be **single URL repro with logging**,

This makes the most sense since it is targeted and not all encompassing

Great. We will take the **single URL repro with logging** route.

B6 readiness confirmed

Based on your "targeted and not all encompassing" decision, we have enough clarity to proceed without expanding scope.

Next step: Single URL repro with logging

Outcome

Run the scraper against one URL, twice, with logging that proves where `Posting Date` becomes incorrect:

- during extraction
- or during post processing and assignment

No fixes yet. Evidence only.

Step 1: Pick the repro URL

Use one URL where you have seen the bad outcome at least once. Based on what you provided, the best candidate is the one that already has a clean, scrapeable absolute date in the source:

- **Dice URL** (has `posted-date="2025-12-18T01:04:25.000Z"`)
[https://www.dice.com/job-detail/a81d4e76-e7ae-4ef1-864e-86f7226fcff0 ↗](https://www.dice.com/job-detail/a81d4e76-e7ae-4ef1-864e-86f7226fcff0)

If you would rather use EdTech, send the specific EdTech job URL you want to use. Otherwise, we will proceed with Dice.

Step 2: Run the narrowest possible command twice

Run your smallest repro command that scrapes a **single URL** or a **single job**.

Examples (use whatever matches your project, do not change anything yet):

- a command that scrapes one URL
- or a command that scrapes one board with one page and one job

If you already have a "single URL" mode, use it.

What to capture for each run

For **Run 1** and **Run 2**, capture:

- The exact command used
- Terminal output lines that show:
 - raw `Posted` text
 - raw scraped absolute date candidate
 - final `Posting Date` assigned into the row

If you do not currently print those three values, we will add minimal debug logging in one place, then rerun. That is still in scope because it is instrumentation, not a fix.

Step 3: Where to place the debug logging (minimal)

You will add temporary debug prints at exactly these points:

1. Right after you extract `Posted`
 - Log: URL, board, `posted_text`
2. Right after you extract the absolute date candidate
 - Log: URL, board, `posting_date_raw` (or equivalent)
3. Right before writing the final row to CSV
 - Log: URL, board, final `Posted`, final `Posting Date`

This tells us whether corruption happens before or after row assembly.

I will not tell you where to edit until I see the function names in your code, because I do not want to guess.

Your move

Reply with one of these:

Option A (recommended)

"I want to use the Dice URL repro."

Then paste:

- The command you normally run to scrape a single URL (or the closest equivalent)

Option B

"I want to use an EdTech URL."

Then paste:

- The EdTech job URL
- The command you will run

Once I have the command shape, I will tell you exactly what to add for logging, where, and what output to paste back so we can pinpoint the failure stage.



↳ For **Run 1** and **Run 2**, capture:
* The exact command used
* Terminal output lines that show:
* raw `Posted` text
* raw scraped absolute date candidate
* final `Posting Date` assigned into the row
If you do not currently print those three values, we will add minimal...

We do not capture a "BIV DEBUG" line for edtech.com jobs, so I'd like to know where to add commands.

Great question. This is exactly the right moment to ask it, and you're thinking about it in the right way.

Short answer first, then the concrete steps.

Short answer

You should **not** try to add `BIV DEBUG` lines everywhere or copy Built In logic into EdTech.

Instead, add **one small, board-agnostic debug hook** at the point where:

1. `Posted` is finalized
2. `Posting Date` is finalized
3. The row is about to be written to CSV

That guarantees you see the values for **every board**, including EdTech, without changing behavior.

This is instrumentation, not a fix.

Where to add the debug logging

Think in terms of **data lifecycle**, not board logic.

Every job, regardless of board, passes through these three phases:

1. Extraction

Board-specific scraping happens here.

2. Normalization / assembly

Fields are cleaned, merged, defaulted, or left blank.

3. Emission

The row is written to CSV.

EdTech does not emit `BIV DEBUG` because those logs live in **board-specific extractors**.

We want logging **after board logic**, where all boards converge.

The single best place to log

Find the function or section of code that:

- Builds the final `row` dictionary
- Or immediately precedes writing the row to CSV or Google Sheets

This is usually something like:

- `build_row(...)`
- `assemble_job_row(...)`
- `normalize_job_data(...)`
- Or the loop right before `writer.writerow(row)`

If you are unsure, search for where `Posting Date` is last assigned.

bash

 Copy code

```
grep -R "Posting Date" -n .
```

You are looking for the **last assignment**, not the first.

Exactly what to log (copy/paste safe)

Add a temporary debug block **right before the row is written**.

Example pattern (adapt variable names only):

python

 Copy code

```
debug(  
    "POSTING DATE TRACE",
```

```
    board=board_name,  
    url=url,  
    posted_raw=row.get("Posted"),  
    posting_date_final=row.get("Posting Date"),  
)
```

If you have access to the raw scraped value earlier, add **one more log** just after extraction:

python

 Copy code

```
debug(  
    "POSTING DATE RAW",  
    board=board_name,  
    url=url,  
    posting_date_raw=posting_date_raw,  
)
```

That's it. Two logs max.

No conditionals. No board checks. No logic changes.

Why this works for EdTech

- EdTech already scrapes correctly sometimes.
- The bug appears **after extraction**, not instead of it.
- By logging at the convergence point, you will see:
 - Whether `posting_date_raw` existed
 - Whether it got overwritten later
 - Whether it was replaced with `Posted`

This directly answers your earlier question:

"Is this a clue on how to resolve this?"

Yes. This logging will tell us **where**, not just **that**, it breaks.

How to run the repro cleanly

Once the logging is added:

1. Pick **one EdTech URL** where you've seen both outcomes.
2. Run the scraper **twice** with the same command.
3. Capture only:
 - POSTING DATE RAW
 - POSTING DATE TRACE

Ignore everything else.

What you should send back

When ready, paste:

1. The **exact command** you ran
2. The debug output for:
 - Run 1
 - Run 2

From that, we will be able to say with confidence:

- "Extraction failed"
- or
- "Post-processing overwrote the value"

And only then will we talk about fixes.

If you want, next you can paste the function where rows are written and I'll point to the **exact line number** to add the log.



↳ If you are unsure, search for where `Posting Date` is last assigned. bash Copy code `grep -R "Posting Date" -n .` You are looking for the **last assignment**, not the first.

A great deal of information was presented. These were the last few rows of the Terminal that were displayed. Does this help us, or do I need to review more?

,Salary Rule,Salary Near Min,Salary Status,Salary Note,Salary Est. (Low-High),Location Chips,Applicant Regions,Visibility Status,Confidence Score,Confidence Mark
Binary file ./__pycache__/po_job_scraper.cpython-314.pyc matches
Binary file ./__pycache__/po_job_scraper.cpython-313.pyc matches
Binary file ./__pycache__/classification_rules.cpython-313.pyc matches
Binary file ./__pycache__/gsheets_utils.cpython-314.pyc matches
Binary file ./__pycache__/gsheets_utils.cpython-313.pyc matches
Binary file ./__pycache__/classification_rules.cpython-314.pyc matches
.docs/Terminal output- 20251228-1503.txt:47: "Posting Date": "2025-11-23",
.docs/Terminal output- 20251228-1503.txt:117: "Posting Date": "2025-11-23",
.docs/test-url https://builtinvancouver.org:job:ai-business-analyst:7615906- 20251227-1847.md:136: "Posting Date": "2025-12-20",
.docs/job_scraper_data_dictionary.csv:12:"Posted","Location and Posting","String","Vendor metadata","Staleness Gate","Keeps the human friendly posted text, for example Posted 3 Days Ago, for quick scanning.","Used as a backup when Posting Date parsing is uncertain.,""Posted 3 Days Ago"
.docs/job_scraper_data_dictionary.csv:13:"Posting Date","Location and Posting","Date string","Scraper derived","Staleness Gate","Captures the actual posting date for sorting by freshness and staleness rules.","Parsed from Posted text or structured metadata into a consistent format.,""2025-11-21"
.docs/test-url https://builtinvancouver.org:job:ai-business-analyst:7615906- 20251227-1747.txt:136: "Posting Date": "2025-12-20",
.docs/Terminal output- 20251228-1256.txt:47: "Posting Date": "2025-12-28",

```
Binary file ./job_scraper_cache.sqlite matches
./gsheets_utils.py:319:      "Posting Date":
_normalize_sheet_value(
./gsheets_utils.py:320:      keep_row.get("Posting
Date") or keep_row.get("Posted") or period
./gsheets_utils.py:355:      "Posting Date":
_normalize_sheet_value(skip_row.get("Posting Date",
"")),
Binary file ./pycache/Users/ange/job-
scraper/po_job_scraper.cpython-39.pyc matches
./classification_rules.py:468:  posting_date_str =
row.get("Posting Date") or ""
./git/Run-Professional-Git-Workflow.sh:49:  # -
Posting Date populated for BuiltInVancouver
(.venv) ange@mac job-scraper %
```

Yes, this helps a lot. You do not need to review more to get the first actionable clue.

What your terminal snippet tells us

Two lines in your grep output are the smoking gun:

- `./gsheets_utils.py:319-320`
 - `"Posting Date": _normalize_sheet_value(keep_row.get("Posting
Date") or keep_row.get("Posted") or period)`

That line explicitly says:

If `Posting Date` is missing, use `Posted`. If that is missing, use `period`.

So even when your scraper correctly finds an absolute date sometimes, any path where `keep_row["Posting Date"]` is empty will cause the sheet writer to copy the relative `Posted` text into the `Posting Date` column.

That directly explains the failure you are seeing.

It also explains why it can be inconsistent within the same board:

- When extraction finds a date, `Posting Date` stays correct.
- When extraction misses the date (for any reason), the fallback in `gsheets_utils.py` forces `Posting Date` to become relative text.

This is not an EdTech only issue. It is a shared output mapping issue.

One more important clue

Your data dictionary file says:

- `Posting Date` "Parsed from Posted text or structured metadata into a consistent format."

That is the old rule. Your new rule is stricter:

- Posting Date must be scraped from the job page
- Never computed from Posted
- Blank if cannot be scraped

So later we will update the dictionary to match the new contract. Not right now, but it is worth noting.

Best next step

We are past "where do I add debug." We already found a deterministic corruption point.

Next step is a very small, reviewable change:

Change to make

In `gsheets_utils.py`, stop using `Posted` as a fallback source for `Posting Date`.

Specifically, change the mapping so that `Posting Date` uses only:

- `keep_row.get("Posting Date")`, otherwise blank (or `period` if you still want a run date, but your new rule says blank)

Given your user story and invariants, the correct fallback is **blank**.

Exact steps to take now

1. Open the code at the exact lines

Run:

```
bash
```

 Copy code

```
sed -n '300,340p' gsheets_utils.py
```

Paste the output here so we can confirm context before changing anything.

2. Implement the minimal change

You will likely change this:

python

 Copy code

```
keep_row.get("Posting Date") or keep_row.get("Posted") or period
```

To this:

python

 Copy code

```
keep_row.get("Posting Date") or ""
```

Then normalization runs and the field stays blank if missing.

3. Re run one targeted repro

Use one URL where `Posting Date` is sometimes missing, and confirm:

- `Posted` still contains relative text
- `Posting Date` is either an absolute date or blank
- Never relative text

Why this fits your SOW

- Small, reviewable change
- No refactor
- Directly enforces the invariant “Posting Date must never mirror Posted”
- Solves the inconsistency across boards at the shared output layer

Paste the `sed` output and we will make the change precisely and safely.



```
(.venv) ange@mac job-scraper % sed -n '300,340p' gsheets_utils.py
```

```
def to_keep_sheet_row(keep_row, applied="", reason=""):
    # if explicit values are passed, use them; otherwise fall
```

back to the row

```
    applied_value = applied if applied != "" else
keep_row.get("Applied?", "")
    reason_value = reason if reason != "" else
keep_row.get("Reason", "")
    period = keep_row.get("Period", "")
```

```
return {
    "Applied?": _normalize_sheet_value(applied_value),
    "Reason": _normalize_sheet_value(reason_value),
    "Date Scraped":
_normalize_sheet_value(keep_row.get("Date Scraped",
"")),
    "Title":
_normalize_sheet_value(keep_row.get("Title", "")),
    "Job ID (Vendor)"':
_normalize_sheet_value(keep_row.get("Job ID (Vendor)",
"")),
    "Job ID (Numeric)"':
_normalize_sheet_value(keep_row.get("Job ID
(Numeric)", "")),
    "Job Key":
_normalize_sheet_value(keep_row.get("Job Key", "")),
    "Company":
_normalize_sheet_value(keep_row.get("Company", "")),
    "Career Board":
_normalize_sheet_value(keep_row.get("Career Board",
"")),
    "Location":
_normalize_sheet_value(keep_row.get("Location", "")),
    "Posted":
_normalize_sheet_value(keep_row.get("Posted") or
period),
    "Posting Date": _normalize_sheet_value(
keep_row.get("Posting Date") or
keep_row.get("Posted") or period
),
    "Valid Through":
_normalize_sheet_value(keep_row.get("Valid Through",
```

```
""")),
    "Job URL":  
    _normalize_sheet_value(keep_row.get("Job URL", "")),
    "Apply URL":  
    _normalize_sheet_value(keep_row.get("Apply URL", "")),
    "Apply URL Note":  
    _normalize_sheet_value(keep_row.get("Apply URL Note",
    "")),
    "Description Snippet":  
    _normalize_sheet_value(keep_row.get("Description
Snippet", "")),
    "WA Rule":  
    _normalize_sheet_value(keep_row.get("WA Rule", "")),
    "Remote Rule":  
    _normalize_sheet_value(keep_row.get("Remote Rule",
    "")),
    "US Rule":  
    _normalize_sheet_value(keep_row.get("US Rule", "")),
    "Salary Max Detected":  
    _normalize_sheet_value(keep_row.get("Salary Max
Detected", "")),
    "Salary Rule":  
    _normalize_sheet_value(keep_row.get("Salary Rule",
    "")),
    "Salary Near Min":  
    _normalize_sheet_value(keep_row.get("Salary Near Min",
    "")),
    "Salary Status":  
    _normalize_sheet_value(keep_row.get("Salary Status",
    "")),
    "Salary Note":  
    _normalize_sheet_value(keep_row.get("Salary Note",
    "")),
    "Salary Est. (Low-High)":  
    _normalize_sheet_value(keep_row.get("Salary Est. (Low-
High)", "")),
    "Location Chips":  
    _normalize_sheet_value(keep_row.get("Location Chips",
    "")),
    "Applicant Regions":
```

```
_normalize_sheet_value(keep_row.get("Applicant
Regions", "")),
    "Visibility Status":
    _normalize_sheet_value(keep_row.get("Visibility Status",
"")),
    "Confidence Score":
    _normalize_sheet_value(keep_row.get("Confidence
Score", "")),
    "Confidence Mark":
    _normalize_sheet_value(keep_row.get("Confidence
Mark", "")),
(.venv) ange@mac job-scraper %
```

This is perfect context. The bug is 100 percent in this mapping.

Right now you have:

- `Posted` : falls back to `period` if missing. Fine if that is intentional.
- `Posting Date` : falls back to `Posted` or `period`. This is what corrupts the field.

Based on your user story and invariants, `Posting Date` must be either:

- an absolute date scraped from the page, or
- blank

So we should remove both fallbacks.

✓ Minimal code change

In `gsheets_utils.py`, change this:

```
python Copy code

"Posting Date": _normalize_sheet_value(
    keep_row.get("Posting Date") or keep_row.get("Posted") or period
),
```

To this:

```
python Copy code
```

```
"Posting Date": _normalize_sheet_value(keep_row.get("Posting Date", "")),
```

Why this exact form

- It stays blank if missing.
- It does not consult `Posted`.
- It does not consult `period`.
- It is a tiny, reviewable change.

Make the edit

Use whatever editor you prefer. If you want a copy paste safe terminal edit with no surprises:

bash

 Copy code

```
perl -0pi -e 's/"Posting Date": _normalize_sheet_value\\(\n\\s*keep_row\\.get
```

Then confirm the change:

bash

 Copy code

```
git diff gsheets_utils.py
```

You should see only that one mapping line change.

Quick sanity check

Run a quick grep to ensure there are no other similar fallbacks for Posting Date:

bash

 Copy code

```
grep -R "\"Posting Date\": _normalize_sheet_value" -n gsheets_utils.py
```

You already saw a skip mapping at line 355 earlier. We should review that next, but do not change it yet unless it also falls back to `Posted`.

Repro test

Do one run where you previously saw the corruption, then verify a few rows:

Expected after this change:

- `Posted` can still show relative text.
- `Posting Date` will never show relative text.
- If scraper did not scrape a date, `Posting Date` will be blank.

If you have a single URL mode, use one URL that sometimes misses the date, since that used to trigger the fallback.

Commit

Once verified:

bash

 Copy code

```
git status  
git add gsheets_utils.py  
git commit -m "Fix: prevent Posting Date fallback to Posted"
```

Paste your `git diff` output and I will confirm the change matches the SOW invariants before you run the repro.



```
(.venv) ange@mac job-scraper % perl -0pi -e 's/"Posting  
Date": _normalize_sheet_value\(|n\s*keep_row\).get\  
("Posting Date") or keep_row\).get("Posted")\| or  
period\|n\s*"),/"Posting Date":  
_normalize_sheet_value(keep_row.get("Posting Date",  
"")),/g' gsheets_utils.py
```

```
(.venv) ange@mac job-scraper % git diff gsheets_utils.py
```

```
diff --git a/gsheets_utils.py b/gsheets_utils.py  
index 4240bb7..f354239 100644  
--- a/gsheets_utils.py  
+++ b/gsheets_utils.py  
@@ -316,9 +316,7 @@ def  
to_keep_sheet_row(keep_row, applied="", reason=""):  
    "Career Board":
```

```

_normalize_sheet_value(keep_row.get("Career Board",
"")),
    "Location":
_normalize_sheet_value(keep_row.get("Location", "")),
    "Posted":
_normalize_sheet_value(keep_row.get("Posted") or
period),
-    "Posting Date": _normalize_sheet_value(
-        keep_row.get("Posting Date") or
keep_row.get("Posted") or period
-    ),
+    "Posting Date":
_normalize_sheet_value(keep_row.get("Posting Date",
"")),
    "Valid Through":
_normalize_sheet_value(keep_row.get("Valid Through",
"")),
    "Job URL":
_normalize_sheet_value(keep_row.get("Job URL", "")),
    "Apply URL":
_normalize_sheet_value(keep_row.get("Apply URL", "")),
(.venv) ange@mac job-scraper %

```

That diff is exactly what we wanted. It is minimal, targeted, and it enforces the invariant.

■ Change review result

- Removes fallback from `Posting Date` to `Posted` ✓
- Removes fallback from `Posting Date` to `period` ✓
- Keeps `Posted` behavior unchanged ✓
- Small and reviewable ✓

Next, check the Skipped row mapping before you run the repro

Earlier your grep output showed a second mapping:

- `gsheets_utils.py:355: "Posting Date":`
`_normalize_sheet_value(skip_row.get("Posting Date", ""))`

That one already looks correct, but let's confirm there is no fallback hidden nearby.

Run:

```
bash
```

 Copy code

```
sed -n '340,380p' gsheets_utils.py
```

Paste it here.

If it is clean, we will proceed to the repro test.

Repro test

After we confirm the skipped mapping is clean, run your normal scraper command that previously produced the bad behavior.

What to validate in the output

- Find at least one row where `Posted` contains relative text like `Posted 1 week ago`
 - Confirm the corresponding `Posting Date` is either:
 - a date string, or
 - blank
- It must never be relative text.

If you want the fastest verification without opening Sheets, you can grep your output artifact for a row where `Posting Date` equals `Posted`.

Once the test is clean, we will commit.

Commit commands (ready when you are)

```
bash
```

 Copy code

```
git status  
git add gsheets_utils.py  
git commit -m "Fix: prevent Posting Date fallback to Posted"
```

Send the `sed` output first, then we will move to the repro.



```
(.venv) ange@mac job-scraper % sed -n '340,380p' gsheets_utils.py
```

```
def to_skipped_sheet_row(skip_row, applied="", reason=""):  
    return {  
        "Date Scraped":  
            _normalize_sheet_value(skip_row.get("Date Scraped", "")),  
        "Title": _normalize_sheet_value(skip_row.get("Title", "")),  
        "Job ID (Vendor)":  
            _normalize_sheet_value(skip_row.get("Job ID (Vendor)", "")),  
        "Job ID (Numeric)":  
            _normalize_sheet_value(skip_row.get("Job ID (Numeric)", "")),  
        "Job Key":  
            _normalize_sheet_value(skip_row.get("Job Key", "")),  
        "Company":  
            _normalize_sheet_value(skip_row.get("Company", "")),  
        "Career Board":  
            _normalize_sheet_value(skip_row.get("Career Board", "")),  
        "Location":  
            _normalize_sheet_value(skip_row.get("Location", "")),  
        "Posted":  
            _normalize_sheet_value(skip_row.get("Posted", "")),  
        "Posting Date":  
            _normalize_sheet_value(skip_row.get("Posting Date", "")),  
        "Valid Through":  
            _normalize_sheet_value(skip_row.get("Valid Through", "")),  
        "Job URL":  
            _normalize_sheet_value(skip_row.get("Job URL", "")),
```

```
#"Apply URL":  
    _normalize_sheet_value(skip_row.get("Apply URL", "")),  
    #"Apply URL Note":  
    _normalize_sheet_value(skip_row.get("Apply URL Note", "")),  
    "Reason Skipped":  
    _normalize_sheet_value(skip_row.get("Reason Skipped", reason)),  
    "WA Rule":  
    _normalize_sheet_value(skip_row.get("WA Rule", "")),  
    "Remote Rule":  
    _normalize_sheet_value(skip_row.get("Remote Rule", "")),  
    "US Rule":  
    _normalize_sheet_value(skip_row.get("US Rule", "")),  
    "Salary Max Detected":  
    _normalize_sheet_value(skip_row.get("Salary Max Detected", "")),  
    #"Skip Rule":  
    _normalize_sheet_value(skip_row.get("Skip Rule", "")),  
    "Salary Rule":  
    _normalize_sheet_value(skip_row.get("Salary Rule", "")),  
    #"Salary Near Min":  
    _normalize_sheet_value(skip_row.get("Salary Near Min", "")),  
    #"Salary Status":  
    _normalize_sheet_value(skip_row.get("Salary Status", "")),  
    #"Salary Note":  
    _normalize_sheet_value(skip_row.get("Salary Note", "")),  
    #"Salary Est. (Low-High)":  
    _normalize_sheet_value(skip_row.get("Salary Est. (Low-High)", "")),  
    "Location Chips":  
    _normalize_sheet_value(skip_row.get("Location Chips", "")),  
    "Applicant Regions":  
    _normalize_sheet_value(skip_row.get("Applicant Regions", "")),
```

```
}
```

(.venv) ange@mac job-scraper %

Looks clean. No hidden fallback.

■ Skipped mapping check passed

- `Posting Date` in skipped rows stays whatever is in `skip_row["Posting Date"]` or blank ✓
- No fallback to `Posted` ✓

Repro test next

Run your normal scraper command that previously produced the issue.

If you have a quicker run mode, use that. If not, run your standard command.

Fast verification options (pick one)

Option A: Terminal verification from the run artifact

If your run writes a terminal output file in `docs/Terminal output-txt`, you can check for the specific failure pattern:

1. Find rows where `Posting Date` equals a relative "Posted ... ago" string:

bash

 Copy code

```
grep -R "\"Posting Date\": \"Posted\" -n ./docs | tail -n 20
```

Expected result now:

- This should return **no matches** for new runs.
2. Also check for cases where `Posting Date` still has real dates:

bash

 Copy code

```
grep -R "\"Posting Date\": \"2025-\" -n ./docs | tail -n 20
```

This confirms we did not wipe valid dates.

Option B: Spot check in Sheets

- Confirm `Posted` shows relative text

- Confirm `Posting Date` is either date or blank, never relative

What I need from you

Paste:

1. The command you ran
2. The grep output for Option A, step 1 (even if it is empty)
3. One small excerpt showing a row with a valid `Posting Date` date, if available

Once we see the failure pattern is gone, we will commit:

bash

 Copy code

```
git status  
git add gsheets_utils.py  
git commit -m "Fix: prevent Posting Date fallback to Posted"
```



```
(.venv) ange@mac job-scraper % grep -R "\"Posting  
Date\": \"Posted" -n ./docs | tail -n 20
```

```
(.venv) ange@mac job-scraper % grep -R "\"Posting  
Date\": \"2025-" -n ./docs | tail -n 20
```

```
./docs/Terminal output- 20251228-1503.txt:47: "Posting  
Date": "2025-11-23",  
./docs/Terminal output- 20251228-1503.txt:117: "Posting  
Date": "2025-11-23",  
./docs/test-url https-:builtinvancouver.org:job:ai-  
business-analyst:7615906- 20251227-1847.md:136:  
"Posting Date": "2025-12-20",  
./docs/test-url https-::builtinvancouver.org:job:ai-  
business-analyst:7615906- 20251227-1747.txt:136:  
"Posting Date": "2025-12-20",  
./docs/Terminal output- 20251228-1256.txt:47: "Posting  
Date": "2025-12-28",  
(.venv) ange@mac job-scraper %
```

This output helps, but it does **not** yet prove the fix works, because both greps are hitting **older files** in `./docs` (all dated 20251228 or 20251227). You have not shown a new run artifact created after the code change.

So:

- ✓ Good sign: no matches for "Posting Date": "Posted" in the docs you searched.
- ⚠ Not sufficient: we need evidence from a run executed **after** the change, otherwise we might just be looking at files that never had the problem.

What to do next (minimal, first time friendly)

1) Run the scraper once, after the code change

Use your normal command. If you have a lightweight run mode, use it.

If you want the leanest possible validation, run a single board or a single URL if your tool supports it.

2) Identify the newest terminal output file

After the run finishes, list the most recent terminal output file:

bash

 Copy code

```
ls -lt ./docs | head -n 15
```

Look for the newest file that starts with something like:

- `Terminal output-` ...

3) Grep only that newest file

Replace the filename below with the new one you see:

bash

 Copy code

```
grep '\"Posting Date\": \"Posted\" -n ./docs/<NEW TERMINAL OUTPUT FILE>'<br/>grep '\"Posting Date\": \"2025-\" -n ./docs/<NEW TERMINAL OUTPUT FILE>' |
```

Expected results for the new file:

- First grep returns **no lines**
- Second grep returns **some lines** if any boards scraped real dates in that run

4) If the scraper does not create a new terminal output file

Then we will instead search in whatever output your run creates (CSV, JSON, or direct Google Sheets write), but we will decide that based on what `ls -lt ./docs` shows.

Once we validate with a new run

Then we commit:

bash

 Copy code

```
git status  
git add gsheets_utils.py  
git commit -m "Fix: prevent Posting Date fallback to Posted"
```

Send me:

1. the command you ran (or tell me you ran your standard run)
2. the output of `ls -lt ./docs | head -n 15`

Then I will tell you exactly which file to grep and we will lock the proof.



(.venv) ange@mac job-scraper % ls -lt ./docs | head -n 15

total 9744

```
-rw-r--r--@ 1 ange staff 149770 Dec 29 11:18  
Statement of Work Prompter for the Scraper Project.pdf  
-rw-r--r-- 1 ange staff 860544 Dec 28 18:00 test-url  
https://builtinvancouver.org:job:ai-business-analyst:7615906- 20251227-1847.md  
-rw-r--r-- 1 ange staff 860544 Dec 28 18:00 test-url  
https://builtinvancouver.org:job:ai-business-
```

```
analyst:7615906- 20251227-1747.txt
-rw-r--r-- 1 ange staff 416514 Dec 28 18:00 Terminal
output- 20251228-1503.txt
-rw-r--r-- 1 ange staff 142375 Dec 28 18:00 Terminal
output- 20251228-1256.txt
-rw-r--r--@ 1 ange staff 580 Dec 25 20:51
requirements20251031-1150.txt
-rw-r--r--@ 1 ange staff 75486 Dec 25 20:51
image.png
-rw-r--r--@ 1 ange staff 73684 Dec 25 20:51 image-
2.png
-rw-r--r--@ 1 ange staff 842680 Dec 25 20:51 image-
1.png
-rw-r--r--@ 1 ange staff 83306 Dec 25 20:51
https-::builtinvancouver.org:job:staff-product-manager-
app-modernization-data-migration:7110129- source
code.txt
-rw-r--r--@ 1 ange staff 84370 Dec 25 20:51
https-::builtinvancouver.org:job:implementation-
business-analyst:7786205- source code.txt
-rw-r--r--@ 1 ange staff 172 Dec 25 20:51 Scraper
Requirements for the Progress line.gdoc
-rw-r--r--@ 1 ange staff 74969 Dec 19 10:53 view-
source-https-::builtinvancouver.org:job:business-
analyst:7601620.txt
-rw-r--r--@ 1 ange staff 8494 Dec 3 11:02
job_scraper_data_dictionary.csv
(.venv) ange@mac job-scraper % grep "\"Posting Date\":
\"Posted\" -n ./docs/<NEW TERMINAL OUTPUT FILE>"
```

grep: ./docs/<NEW TERMINAL OUTPUT FILE>: No such file or directory

(.venv) ange@mac job-scraper % grep "\"Posting Date\":
\"2025-\" -n ./docs/<NEW TERMINAL OUTPUT FILE>" | head -n 20

grep: ./docs/<NEW TERMINAL OUTPUT FILE>: No such file or directory

(.venv) ange@mac job-scraper %

This is super clear now.

What your `ls` proves

You have **not run the scraper since making the code change** (or, if you did, it did not generate a new file in `./docs`).

The newest relevant “Terminal output” files are still:

- `Terminal output- 20251228-1503.txt`
- `Terminal output- 20251228-1256.txt`

Those are from **Dec 28**, which means we cannot validate the fix yet. Your grep failed only because you literally pasted the placeholder string, which is totally fine. It confirms we still need a new artifact name.

Next step (simple)

1) Run the scraper now

Run your normal command.

If you want the leanest run, choose a smaller scope run if your program supports it (single board, or a short run). If not, do your standard run.

2) Immediately list docs again

After the run finishes:

```
bash Copy code
ls -lt ./docs | head -n 10
```

You should see a new file like:

- `Terminal output- 20251229-XXXX.txt`
(or whatever naming your script uses)

3) Grep the new file only

Replace the filename with the real one from the list:

```
bash Copy code
```

```
grep '\"Posting Date\": \"Posted\" -n ./docs/Terminal output- 20251229-XXX  
grep '\"Posting Date\": \"2025-\" -n ./docs/Terminal output- 20251229-XXXX
```

Pass criteria

- First grep returns **no lines**
- Second grep returns **some lines** (if any sources provide absolute dates in that run)

If the second grep returns nothing, that is not automatically a failure. It just means no boards produced an absolute date in that run. In that case we validate via a known board like Dice or Built In Vancouver, using the URLs you already listed.

Once it passes, commit

bash

 Copy code

```
git status  
git add gsheets_utils.py  
git commit -m "Fix: prevent Posting Date fallback to Posted"
```

What to send me

Paste:

1. the command you ran
2. the new `ls -lt ./docs | head -n 10` output
3. the two grep outputs against the new file

Then I will confirm DoD is met and we will close this build cleanly.



Actually I did make a run:

```
(.venv) ange@mac job-scraper % python  
po_job_scraper.py --only workingnomads --limit-pages 1  
--limit-links 50
```

```
[2025-12-29 23:21:35] [BACKUP      ].Saved to:  
/Users/ange/job-scraper/Code  
Archive/po_job_scraper_backup_20251229_232135.py  
[2025-12-29 23:21:35] [BACKUP      ].Saved to:  
/Users/ange/job-scraper/Code  
Archive/gsheets_utils_backup_20251229_232135.py  
[2025-12-29 23:21:35] [BACKUP      ].Saved to:  
/Users/ange/job-scraper/Code  
Archive/classification_rules_backup_20251229_232135.  
py  
[2025-12-29 23:21:35] [BACKUP      ].Saved to:  
/Users/ange/job-scraper/Code  
Archive/edsurge_jobs_backup_20251229_232135.py  
[2025-12-29 23:21:35] [BACKUP      ].Saved to:  
/Users/ange/job-scraper/Code  
Archive/logging_utils_backup_20251229_232135.py  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: requests  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: requests-cache  
[2025-12-29 23:21:35] [SETUP      ].Installing  
missing dependency: beautifulsoup4  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: beautifulsoup4 in  
./venv/lib/python3.13/site-packages (4.14.2)  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: soupsieve>1.2 in  
./venv/lib/python3.13/site-packages (from  
beautifulsoup4) (2.8)  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: typing-extensions>=4.0.0 in  
./venv/lib/python3.13/site-packages (from  
beautifulsoup4)  
                                (4.15.0)  
[2025-12-29 23:21:35] [SETUP      ].Installing  
missing dependency: python-dateutil  
[2025-12-29 23:21:35] [SETUP      ].Requirement  
already satisfied: python-dateutil in  
./venv/lib/python3.13/site-packages (2.9.0.post0)  
[2025-12-29 23:21:35] [SETUP      ].Requirement
```

```
already satisfied: six>=1.5 in ./venv/lib/python3.13/site-packages (from python-dateutil) (1.17.0)
[2025-12-29 23:21:35] [SETUP      ].Requirement
already satisfied: playwright
[2025-12-29 23:21:35] [SETUP      ].Requirement
already satisfied: wcwidth
[2025-12-29 23:21:35] [ENV       ].Using Python
from: /Users/ange/job-scraper/.venv/bin/python
[2025-12-29 23:21:35] [ENV       ].Virtual
environment: Yes
[2025-12-29 23:21:35] [ENV       ].Working
directory: /Users/ange/job-scraper
[2025-12-29 23:21:35] [INFO      ].Starting run
[2025-12-29 23:21:41] [INFO      ].Loaded 3164
prior decisions for carry-forward.
[2025-12-29 23:21:41] [CAREERS   ]...Probing
https://about.gitlab.com/jobs/all-jobs/
[2025-12-29 23:21:59] [CAREERS   ].....1 board(s)
found on https://about.gitlab.com/jobs/all-jobs/
[2025-12-29 23:21:59] [CAREERS   ]...Probing
https://zapier.com/jobs#job-openings
[2025-12-29 23:22:04] [CAREERS   ].....1
board(s) found on https://zapier.com/jobs#job-openings
[2025-12-29 23:22:12] [INFO      ].Processing 50
detail links after dedupe/cap.
[2025-12-29 23:22:28] [KEEP      ].Product
Manager - Senior
[2025-12-29 23:22:28] [KEEP      ]...Workingnomads.....Blackbaud
[2025-12-29 23:22:28] [KEEP      ]...https://www.workingnomads.com/jobs/product-
manager-senior-blackbaud-1323658
[2025-12-29 23:22:28] [KEEP      ]...Hybrid
Location: US.
[2025-12-29 23:22:28] [SALARY    ]...Missing or
Unknown
[2025-12-29 23:22:28] [DONE      ].
[2025-12-29 23:22:44] [KEEP      ].Product
Manager
[2025-12-29 23:22:44] [KEEP      ]
```

[...Workingnomads.....LI.FI
[2025-12-29 23:22:44] [KEEP
]...<https://www.workingnomads.com/jobs/product-manager-lifi-1314125>
[2025-12-29 23:22:44] [KEEP]...Remote
Location: US.
[2025-12-29 23:22:44] [SALARY]...Missing or
Unknown
[2025-12-29 23:22:44] [DONE].
[2025-12-29 23:22:59] [SKIP].Director of
Product - Core Product
[2025-12-29 23:22:59] [SKIP]
]...Workingnomads.....Goodnotes
[2025-12-29 23:22:59] [SKIP]
]...<https://www.workingnomads.com/jobs/director-of-product-core-product-goodnotes-1323344>
[2025-12-29 23:22:59] [SKIP]...Hybrid
Location: US.
[2025-12-29 23:22:59] [SALARY]...Missing or
Unknown
[2025-12-29 23:22:59] [SKIP]...Not a target
role
[2025-12-29 23:22:59] [DONE].
[2025-12-29 23:23:15] [SKIP].Product
Marketing Manager
[2025-12-29 23:23:15] [SKIP]
]...Workingnomads.....Newsela
[2025-12-29 23:23:15] [SKIP]
]...<https://www.workingnomads.com/jobs/product-marketing-manager-newsela-1319865>
[2025-12-29 23:23:15] [SKIP]...Remote
Location: US.
[2025-12-29 23:23:15] [SALARY]...Missing or
Unknown
[2025-12-29 23:23:15] [SKIP]...Not a target
role
[2025-12-29 23:23:15] [DONE].
[2025-12-29 23:23:31] [KEEP].Director -
Product Management
[2025-12-29 23:23:31] [KEEP]

[...Workingnomads.....First Advantage
[2025-12-29 23:23:31] [KEEP
]...<https://www.workingnomads.com/jobs/director-product-management-first-advantage-1324760>
[2025-12-29 23:23:31] [KEEP] ...Remote
Location: US.
[2025-12-29 23:23:31] [SALARY] ...Missing or
Unknown
[2025-12-29 23:23:31] [DONE]].
[2025-12-29 23:23:46] [KEEP].Senior Product
Manager
[2025-12-29 23:23:46] [KEEP]
]...Workingnomads.....Enode
[2025-12-29 23:23:46] [KEEP]
]...<https://www.workingnomads.com/jobs/senior-product-manager-enode-1321870>
[2025-12-29 23:23:46] [KEEP] ...Remote
Location: US.
[2025-12-29 23:23:46] [SALARY] ...Missing or
Unknown
[2025-12-29 23:23:46] [DONE]].
[2025-12-29 23:24:02] [KEEP].Product
Manager
[2025-12-29 23:24:02] [KEEP]
]...Workingnomads.....Vesta
[2025-12-29 23:24:02] [KEEP]
]...<https://www.workingnomads.com/jobs/product-manager-vesta-1311618>
[2025-12-29 23:24:02] [KEEP] ...Remote
Location: US.
[2025-12-29 23:24:02] [SALARY] ...Missing or
Unknown
[2025-12-29 23:24:02] [DONE]].
[2025-12-29 23:24:18] [SKIP].Product
Marketing Manager
[2025-12-29 23:24:18] [SKIP]
]...Workingnomads.....All Hands AI
[2025-12-29 23:24:18] [SKIP]
]...<https://www.workingnomads.com/jobs/product-marketing-manager-all-hands-ai>

[2025-12-29 23:24:18] [SKIP] ...Remote
Location: US.

[2025-12-29 23:24:18] [SALARY] ...Missing or
Unknown

[2025-12-29 23:24:18] [SKIP] ...Not a target
role

[2025-12-29 23:24:18] [DONE]].🚫

[2025-12-29 23:24:33] [KEEP]].Senior Product
Manager

[2025-12-29 23:24:33] [KEEP] ...Workingnomads.....VSP Vision

[2025-12-29 23:24:33] [KEEP] ...<https://www.workingnomads.com/jobs/senior-product-manager-vsp-vision-1316820>

[2025-12-29 23:24:33] [KEEP] ...Remote
Location: US.

[2025-12-29 23:24:33] [SALARY] ...Missing or
Unknown

[2025-12-29 23:24:33] [DONE]].✓

[2025-12-29 23:24:48] [SKIP]].Product
Designer

[2025-12-29 23:24:48] [SKIP] ...Workingnomads.....Warp

[2025-12-29 23:24:48] [SKIP] ...<https://www.workingnomads.com/jobs/product-designer-warp>

[2025-12-29 23:24:48] [SKIP] ...Remote
Location: US.

[2025-12-29 23:24:48] [SALARY] ...Missing or
Unknown

[2025-12-29 23:24:48] [SKIP] ...Not a target
role

[2025-12-29 23:24:48] [DONE]].🚫

[2025-12-29 23:25:04] [KEEP]].Senior Product
Manager

[2025-12-29 23:25:04] [KEEP] ...Workingnomads.....InPost

[2025-12-29 23:25:04] [KEEP] ...<https://www.workingnomads.com/jobs/senior-product-manager-inpost-1314374>

[2025-12-29 23:25:04] [KEEP] ...Remote
Location: US.

[2025-12-29 23:25:04] [SALARY] ...Missing or
Unknown

[2025-12-29 23:25:04] [DONE]].

[2025-12-29 23:25:20] [KEEP]].Product
Manager

[2025-12-29 23:25:20] [KEEP]
]...Workingnomads.....Unified

[2025-12-29 23:25:20] [KEEP]
]...<https://www.workingnomads.com/jobs/product-manager-unified-1286791>

[2025-12-29 23:25:20] [KEEP] ...Remote
Location: US.

[2025-12-29 23:25:20] [SALARY] ...Missing or
Unknown

[2025-12-29 23:25:20] [DONE]].

[2025-12-29 23:25:35] [SKIP]].AI Product
Operations

[2025-12-29 23:25:35] [SKIP]
]...Workingnomads.....Storyteller

[2025-12-29 23:25:35] [SKIP]
]...<https://www.workingnomads.com/jobs/ai-product-operations-storyteller>

[2025-12-29 23:25:35] [SKIP] ...Remote
Location: US.

[2025-12-29 23:25:35] [SALARY] ...Missing or
Unknown

[2025-12-29 23:25:35] [SKIP] ...Not a target
role

[2025-12-29 23:25:35] [DONE]].

[2025-12-29 23:25:51] [SKIP]].Product
Designer

[2025-12-29 23:25:51] [SKIP]
]...Workingnomads.....Elicit

[2025-12-29 23:25:51] [SKIP]
]...<https://www.workingnomads.com/jobs/product-designer-elicit>

[2025-12-29 23:25:51] [SKIP] ...Onsite
Location: US.

[2025-12-29 23:25:51] [SALARY Unknown]	[...Missing or
[2025-12-29 23:25:51] [SKIP role]	[...Not a target
[2025-12-29 23:25:51] [DONE]	[...]
[2025-12-29 23:26:07] [KEEP Manager]	[...Senior Product
[2025-12-29 23:26:07] [KEEP ...Workingnomads.....ReflexAI	
[2025-12-29 23:26:07] [KEEP ... https://www.workingnomads.com/jobs/senior-product-manager-reflexai-1314697	
[2025-12-29 23:26:07] [KEEP Location: US.]	[...Remote
[2025-12-29 23:26:07] [SALARY Unknown]	[...Missing or
[2025-12-29 23:26:07] [DONE]	[...]
[2025-12-29 23:26:23] [KEEP Manager]	[...Senior Product
[2025-12-29 23:26:23] [KEEP ...Workingnomads.....Varicent	
[2025-12-29 23:26:23] [KEEP ... https://www.workingnomads.com/jobs/senior-product-manager-varicent-1315404	
[2025-12-29 23:26:23] [KEEP Location: US.]	[...Remote
[2025-12-29 23:26:23] [SALARY Unknown]	[...Missing or
[2025-12-29 23:26:23] [DONE]	[...]
[2025-12-29 23:26:39] [SKIP Designer]	[...Lead - Product
[2025-12-29 23:26:39] [SKIP ...Workingnomads.....MyFitnessPal	
[2025-12-29 23:26:39] [SKIP ... https://www.workingnomads.com/jobs/lead-product-designer-myfitnesspal-1324437	
[2025-12-29 23:26:39] [SKIP Location: US.]	[...Remote
[2025-12-29 23:26:39] [SALARY Unknown]	[...Missing or

[2025-12-29 23:26:39] [SKIP] ...Not a target role
[2025-12-29 23:26:39] [DONE].
[2025-12-29 23:26:54] [SKIP].Staff Backend Product Software Engineer, Multi-Product Experience
[2025-12-29 23:26:54] [SKIP]...Workingnomads.....Dropbox
[2025-12-29 23:26:54] [SKIP]...https://www.workingnomads.com/jobs/staff-backend-product-software-engineer-multi-product-experience-dropbox-1298530
[2025-12-29 23:26:54] [SKIP]...Remote Location: US.
[2025-12-29 23:26:54] [SALARY]...Missing or Unknown
[2025-12-29 23:26:54] [SKIP]...Not a target role
[2025-12-29 23:26:54] [DONE].
[2025-12-29 23:27:10] [SKIP].Delivery Manager
[2025-12-29 23:27:10] [SKIP]...Workingnomads.....TwinStream
[2025-12-29 23:27:10] [SKIP]...https://www.workingnomads.com/jobs/delivery-manager-product-twinstream-1319517
[2025-12-29 23:27:10] [SKIP]...Remote Location: US.
[2025-12-29 23:27:10] [SALARY]...Missing or Unknown
[2025-12-29 23:27:10] [SKIP]...Not a target role
[2025-12-29 23:27:10] [DONE].
[2025-12-29 23:27:27] [KEEP].Senior Product Manager
[2025-12-29 23:27:27] [KEEP]...Workingnomads.....Green Dot Corporation
[2025-12-29 23:27:27] [KEEP]...https://www.workingnomads.com/jobs/senior-product-manager-green-dot-corporation-1323646
[2025-12-29 23:27:27] [KEEP]...Remote

Location: US.

[2025-12-29 23:27:27] [SALARY] ...Missing or
Unknown [2025-12-29 23:27:27] [DONE]]. [2025-12-29 23:27:43] [SKIP]].Product
Marketing Manager [2025-12-29 23:27:43] [SKIP]
[2025-12-29 23:27:43] [SKIP]
[2025-12-29 23:27:43] [SKIP]
[2025-12-29 23:27:43] [SKIP] ...https://www.workingnomads.com/jobs/product-marketing-manager-aleph-1321868
[2025-12-29 23:27:43] [SKIP] ...Remote
Location: US.
[2025-12-29 23:27:43] [SALARY] ...Missing or
Unknown [2025-12-29 23:27:43] [SKIP] ...Not a target
role [2025-12-29 23:27:43] [DONE]].
[2025-12-29 23:27:58] [SKIP]].Sr. Product
Designer [2025-12-29 23:27:58] [SKIP]
[2025-12-29 23:27:58] [SKIP]
[2025-12-29 23:27:58] [SKIP] ...https://www.workingnomads.com/jobs/sr-product-designer-myfitnesspal-1327611
[2025-12-29 23:27:58] [SKIP] ...Remote
Location: US.
[2025-12-29 23:27:58] [SALARY] ...Missing or
Unknown [2025-12-29 23:27:58] [SKIP] ...Not a target
role [2025-12-29 23:27:58] [DONE]].
[2025-12-29 23:28:15] [KEEP]].Staff Product
Manager [2025-12-29 23:28:15] [KEEP]
[2025-12-29 23:28:15] [KEEP]
[2025-12-29 23:28:15] [KEEP] ...https://www.workingnomads.com/jobs/staff-product-manager-dropbox-1316735
[2025-12-29 23:28:15] [KEEP] ...Remote

Location: US.

[2025-12-29 23:28:15] [SALARY] ...Missing or

Unknown

[2025-12-29 23:28:15] [DONE]].

[2025-12-29 23:28:32] [KEEP]].Director -

Product Management

[2025-12-29 23:28:32] [KEEP]

[...Workingnomads.....First Advantage

[2025-12-29 23:28:32] [KEEP]

[...https://www.workingnomads.com/jobs/director-product-management-first-advantage-1324838

[2025-12-29 23:28:32] [KEEP] ...Remote

Location: US.

[2025-12-29 23:28:32] [SALARY] ...Missing or

Unknown

[2025-12-29 23:28:32] [DONE]].

[2025-12-29 23:28:47] [SKIP]].Product

Marketer

[2025-12-29 23:28:47] [SKIP]

[...Workingnomads.....Elicit

[2025-12-29 23:28:47] [SKIP]

[...https://www.workingnomads.com/jobs/product-marketer-elicit-1287036

[2025-12-29 23:28:47] [SKIP] ...Remote

Location: US.

[2025-12-29 23:28:47] [SALARY] ...Missing or

Unknown

[2025-12-29 23:28:47] [SKIP] ...Not a target role

[2025-12-29 23:28:47] [DONE]].

[2025-12-29 23:29:03] [SKIP]].AI Product Operations

[2025-12-29 23:29:03] [SKIP]

[...Workingnomads.....Storyteller

[2025-12-29 23:29:03] [SKIP]

[...https://www.workingnomads.com/jobs/ai-product-operations-storyteller-1315453

[2025-12-29 23:29:03] [SKIP] ...Remote

Location: US.

[2025-12-29 23:29:03] [SALARY] ...Missing or

Unknown

[2025-12-29 23:29:03] [SKIP] ...Not a target role
[2025-12-29 23:29:03] [DONE].
[2025-12-29 23:29:18] [SKIP].Staff Backend Product Software Engineer, Multi-Product Experience
[2025-12-29 23:29:18] [SKIP]
]...Workingnomads.....Dropbox
[2025-12-29 23:29:18] [SKIP]
]...https://www.workingnomads.com/jobs/staff-backend-product-software-engineer-multi-product-experience-dropbox
[2025-12-29 23:29:18] [SKIP] ...Remote Location: US.
[2025-12-29 23:29:18] [SALARY] ...Missing or Unknown
[2025-12-29 23:29:18] [SKIP] ...Not a target role
[2025-12-29 23:29:18] [DONE].
[2025-12-29 23:29:34] [KEEP].Product Manager
[2025-12-29 23:29:34] [KEEP]
]...Workingnomads.....Douro Labs
[2025-12-29 23:29:34] [KEEP]
]...https://www.workingnomads.com/jobs/product-manager-douro-labs-1286587
[2025-12-29 23:29:34] [KEEP] ...Remote Location: US.
[2025-12-29 23:29:34] [SALARY] ...Missing or Unknown
[2025-12-29 23:29:34] [DONE].
[2025-12-29 23:29:49] [SKIP].Senior Product Designer
[2025-12-29 23:29:49] [SKIP]
]...Workingnomads.....Wealth Wizards
[2025-12-29 23:29:49] [SKIP]
]...https://www.workingnomads.com/jobs/senior-product-designer-wealth-wizards-1320311
[2025-12-29 23:29:49] [SKIP] ...Remote Location: US.

[2025-12-29 23:29:49] [SALARY] ...Missing or
Unknown

[2025-12-29 23:29:49] [SKIP] ...Not a target
role

[2025-12-29 23:29:49] [DONE]].🚫

[2025-12-29 23:30:05] [KEEP]].Staff Product
Manager

[2025-12-29 23:30:05] [KEEP]
]...Workingnomads.....Dropbox

[2025-12-29 23:30:05] [KEEP]
]...<https://www.workingnomads.com/jobs/staff-product-manager-dropbox-1316764>

[2025-12-29 23:30:05] [KEEP] ...Remote
Location: US.

[2025-12-29 23:30:05] [SALARY] ...Missing or
Unknown

[2025-12-29 23:30:05] [DONE]].✓

[2025-12-29 23:30:21] [KEEP]].Product
Manager

[2025-12-29 23:30:21] [KEEP]
]...Workingnomads.....Unified

[2025-12-29 23:30:21] [KEEP]
]...<https://www.workingnomads.com/jobs/product-manager-unified-1286870>

[2025-12-29 23:30:21] [KEEP] ...Remote
Location: US.

[2025-12-29 23:30:21] [SALARY] ...Missing or
Unknown

[2025-12-29 23:30:21] [DONE]].✓

[2025-12-29 23:30:37] [KEEP]].Product Owner

[2025-12-29 23:30:37] [KEEP]
]...Workingnomads.....eClinical Solutions

[2025-12-29 23:30:37] [KEEP]
]...<https://www.workingnomads.com/jobs/product-owner-eclinical-solutions-1305566>

[2025-12-29 23:30:37] [KEEP] ...Remote
Location: US.

[2025-12-29 23:30:37] [SALARY] ...Missing or
Unknown

[2025-12-29 23:30:37] [DONE]].✓

[2025-12-29 23:30:52] [SKIP] .Director -
Product Design
[2025-12-29 23:30:52] [SKIP]
]...Workingnomads.....Qualia
[2025-12-29 23:30:52] [SKIP]
]...<https://www.workingnomads.com/jobs/director-product-design-qualia-1315445>
[2025-12-29 23:30:52] [SKIP] ...Remote
Location: US.
[2025-12-29 23:30:52] [SALARY] ...Missing or
Unknown
[2025-12-29 23:30:52] [SKIP] ...Not a target
role
[2025-12-29 23:30:52] [DONE] .
[2025-12-29 23:31:08] [KEEP] .Technical
Product Manager
[2025-12-29 23:31:08] [KEEP]
]...Workingnomads.....neptune.ai
[2025-12-29 23:31:08] [KEEP]
]...<https://www.workingnomads.com/jobs/technical-product-manager-neptuneai-1319736>
[2025-12-29 23:31:08] [KEEP] ...Remote
Location: US.
[2025-12-29 23:31:08] [SALARY] ...Missing or
Unknown
[2025-12-29 23:31:08] [DONE] .
[2025-12-29 23:31:24] [KEEP] .Product
Manager
[2025-12-29 23:31:24] [KEEP]
]...Workingnomads.....Fortive
[2025-12-29 23:31:24] [KEEP]
]...<https://www.workingnomads.com/jobs/product-manager-fortive-1310387>
[2025-12-29 23:31:24] [KEEP] ...Remote
Location: US.
[2025-12-29 23:31:24] [SALARY] ...Missing or
Unknown
[2025-12-29 23:31:24] [DONE] .
[2025-12-29 23:31:40] [KEEP] .Senior Product
Manager

[2025-12-29 23:31:40] [KEEP]
]...Workingnomads.....Scrambly
[2025-12-29 23:31:40] [KEEP]
]...<https://www.workingnomads.com/jobs/senior-product-manager-scrambly>
[2025-12-29 23:31:40] [KEEP] ...Remote
Location: US.
[2025-12-29 23:31:40] [SALARY] ...Missing or
Unknown
[2025-12-29 23:31:40] [DONE]
[2025-12-29 23:31:55] [SKIP]].Product
Designer
[2025-12-29 23:31:55] [SKIP]
]...Workingnomads.....Ahrefs
[2025-12-29 23:31:55] [SKIP]
]...<https://www.workingnomads.com/jobs/product-designer-ahrefs-1290145>
[2025-12-29 23:31:55] [SKIP] ...Remote
Location: US.
[2025-12-29 23:31:55] [SALARY] ...Missing or
Unknown
[2025-12-29 23:31:55] [SKIP] ...Not a target
role
[2025-12-29 23:31:55] [DONE]
[2025-12-29 23:32:11] [KEEP]].Senior Product
Manager
[2025-12-29 23:32:11] [KEEP]
]...Workingnomads.....InPost
[2025-12-29 23:32:11] [KEEP]
]...<https://www.workingnomads.com/jobs/senior-product-manager-inpost-1327788>
[2025-12-29 23:32:11] [KEEP] ...Remote
Location: US.
[2025-12-29 23:32:11] [SALARY] ...Missing or
Unknown
[2025-12-29 23:32:11] [DONE]
[2025-12-29 23:32:26] [SKIP]].Senior Product
Analyst
[2025-12-29 23:32:26] [SKIP]
]...Workingnomads.....HubSpot

[2025-12-29 23:32:26] [SKIP]
[...https://www.workingnomads.com/jobs/senior-product-analyst-hubspot-1314461
[2025-12-29 23:32:26] [SKIP] [...Remote
Location: US.
[2025-12-29 23:32:26] [SALARY] [...Missing or
Unknown
[2025-12-29 23:32:26] [SKIP] [...Not a target
role
[2025-12-29 23:32:26] [DONE]].
[2025-12-29 23:32:42] [KEEP]].Product
Manager - Automattic
[2025-12-29 23:32:42] [KEEP]
[...Workingnomads.....Automattic Careers
[2025-12-29 23:32:42] [KEEP]
[...https://www.workingnomads.com/jobs/product-manager-automattic-automattic-careers-1315465
[2025-12-29 23:32:42] [KEEP] [...Remote
Location: US.
[2025-12-29 23:32:42] [SALARY] [...Missing or
Unknown
[2025-12-29 23:32:42] [DONE]].
[2025-12-29 23:32:57] [SKIP]].Product
Counsel - Crypto
[2025-12-29 23:32:57] [SKIP]
[...Workingnomads.....Stripe
[2025-12-29 23:32:57] [SKIP]
[...https://www.workingnomads.com/jobs/product-counsel-crypto-stripe-1324260
[2025-12-29 23:32:57] [SKIP] [...Remote
Location: US.
[2025-12-29 23:32:57] [SALARY] [...Missing or
Unknown
[2025-12-29 23:32:57] [SKIP] [...Not a target
role
[2025-12-29 23:32:57] [DONE]].
[2025-12-29 23:33:12] [SKIP]].Product
Compliance Manager
[2025-12-29 23:33:12] [SKIP]
[...Workingnomads.....Stripe

[2025-12-29 23:33:12] [SKIP
]...<https://www.workingnomads.com/jobs/product-compliance-manager-stripe>

[2025-12-29 23:33:12] [SKIP] ...Remote
Location: US.

[2025-12-29 23:33:12] [SALARY] ...Missing or
Unknown

[2025-12-29 23:33:12] [SKIP] ...Not a target
role

[2025-12-29 23:33:12] [DONE]

[2025-12-29 23:33:29] [KEEP]].Senior Product Manager

[2025-12-29 23:33:29] [KEEP]
]...Workingnomads.....Varicent

[2025-12-29 23:33:29] [KEEP]
]...<https://www.workingnomads.com/jobs/senior-product-manager-varicent>

[2025-12-29 23:33:29] [KEEP] ...Remote
Location: US.

[2025-12-29 23:33:29] [SALARY] ...Missing or
Unknown

[2025-12-29 23:33:29] [DONE]

[2025-12-29 23:33:45] [KEEP]].Senior Product Manager

[2025-12-29 23:33:45] [KEEP]
]...Workingnomads.....InPost

[2025-12-29 23:33:45] [KEEP]
]...<https://www.workingnomads.com/jobs/senior-product-manager-inpost-1327745>

[2025-12-29 23:33:45] [KEEP] ...Remote
Location: US.

[2025-12-29 23:33:45] [SALARY] ...Missing or
Unknown

[2025-12-29 23:33:45] [DONE]

[2025-12-29 23:34:00] [SKIP]].Product Designer

[2025-12-29 23:34:00] [SKIP]
]...Workingnomads.....Guidebook

[2025-12-29 23:34:00] [SKIP]
]...<https://www.workingnomads.com/jobs/product->

designer-guidebook

[2025-12-29 23:34:00] [SKIP] ...Remote
Location: US.

[2025-12-29 23:34:00] [SALARY] ...Missing or
Unknown

[2025-12-29 23:34:00] [SKIP] ...Not a target
role

[2025-12-29 23:34:00] [DONE]].

[2025-12-29 23:34:16] [KEEP] [.Product
Manager

[2025-12-29 23:34:16] [KEEP]
...Workingnomads.....Canva

[2025-12-29 23:34:16] [KEEP]
...<https://www.workingnomads.com/jobs/product-manager-canva-1320303>

[2025-12-29 23:34:16] [KEEP] ...Remote
Location: US.

[2025-12-29 23:34:16] [SALARY] ...Missing or
Unknown

[2025-12-29 23:34:16] [DONE]].

[2025-12-29 23:34:31] [SKIP] [.AI Product
Operations

[2025-12-29 23:34:31] [SKIP]
...Workingnomads.....Storyteller

[2025-12-29 23:34:31] [SKIP]
...<https://www.workingnomads.com/jobs/ai-product-operations-storyteller-1315456>

[2025-12-29 23:34:31] [SKIP] ...Remote
Location: US.

[2025-12-29 23:34:31] [SALARY] ...Missing or
Unknown

[2025-12-29 23:34:31] [SKIP] ...Not a target
role

[2025-12-29 23:34:31] [DONE]].

[2025-12-29 23:34:47] [KEEP] [.Product
Manager

[2025-12-29 23:34:47] [KEEP]
...Workingnomads.....Canonical

[2025-12-29 23:34:47] [KEEP]
...<https://www.workingnomads.com/jobs/product->

manager-canonical-1317612
[2025-12-29 23:34:47] [KEEP] ...Onsite
Location: US.
[2025-12-29 23:34:47] [SALARY] ...Missing or
Unknown
[2025-12-29 23:34:47] [DONE].
[2025-12-29 23:35:02] [SKIP].Product
Marketer
[2025-12-29 23:35:02] [SKIP]
...Workingnomads.....Elicit
[2025-12-29 23:35:02] [SKIP]
...https://www.workingnomads.com/jobs/product-marketer-elicit-1287222
[2025-12-29 23:35:02] [SKIP] ...Remote
Location: US.
[2025-12-29 23:35:02] [SALARY] ...Missing or
Unknown
[2025-12-29 23:35:02] [SKIP] ...Not a target
role
[2025-12-29 23:35:02] [DONE].
[2025-12-29 23:35:19] [KEEP].Senior Product
Manager
[2025-12-29 23:35:19] [KEEP]
...Workingnomads.....InPost
[2025-12-29 23:35:19] [KEEP]
...https://www.workingnomads.com/jobs/senior-product-manager-inpost-1321702
[2025-12-29 23:35:19] [KEEP] ...Remote
Location: US.
[2025-12-29 23:35:19] [SALARY] ...Missing or
Unknown
[2025-12-29 23:35:19] [DONE].
[2025-12-29 23:35:21] [WARN]. [GS] Header
on sheet differs from expected fields; appending using
existing header order.
[2025-12-29 23:35:21] [INFO].[GS] Pushed 27
rows to tab 'Table1'.
[2025-12-29 23:35:24] [INFO].[GS] Pushed
23 rows to tab 'Skipped'.
[2025-12-29 23:35:24] [INFO].Playwright

```
success 53, failures 0, fallbacks 0
[2025-12-29 23:35:24] [DONE      ].Kept 27,
Skipped 23 in 828s
[2025-12-29 23:35:24] [DONE      ].CSV:
output/product_owner_jobs_20251229_232135.csv
[2025-12-29 23:35:24] [DONE      ].CSV:
output/skipped_jobs_20251229_232135.csv
(.venv) ange@mac job-scraper %
```

Nice, this run is exactly what we needed. And it also explains why `./docs` did not change.

Why no new `./docs/Terminal output- ...txt` file appeared

Your run output shows CSVs were written to:

- `output/product_owner_jobs_20251229_232135.csv`
- `output/skipped_jobs_20251229_232135.csv`

So this run writes its artifacts to `output/`, not `docs/`. That means our validation should target those CSVs.

Validate the fix using the new CSVs

1) Confirm no “Posted ... ago” leaked into Posting Date

Run:

```
bash Copy code
grep -nE ',Posted [0-9]+|,Posted [A-Za-z]+' output/product_owner_jobs_2025
```

That is a quick scan for any cells that start with `Posted ...` anywhere in the row.

But we want to be more precise for the `Posting Date` column.

2) Find the Posting Date column number

Print the header row with column positions:

```
bash Copy code
```

```
python - <<'PY'
import csv
path = "output/product_owner_jobs_20251229_232135.csv"
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    for i, name in enumerate(header, 1):
        if name in ("Posted", "Posting Date"):
            print(i, name)
PY
```

This will output something like:

- 11 Posted
- 12 Posting Date

3) Check Posting Date values directly

Once you know the `Posting Date` column index (say it prints `12 Posting Date`), run:

bash

 Copy code

```
python - <<'PY'
import csv
path = "output/product_owner_jobs_20251229_232135.csv"
POSTING_DATE_COL = None
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    POSTING_DATE_COL = header.index("Posting Date")
    bad = []
    for row in r:
        v = (row[POSTING_DATE_COL] or "").strip()
        if v.lower().startswith("posted "):
            bad.append(v)
print("bad_count:", len(bad))
if bad[:10]:
    print("examples:", bad[:10])
PY
```

Expected result:

- `bad_count: 0`

That is the clean proof that `Posting Date` is no longer being backfilled with `Posted`.

4) Optional sanity check

Confirm that `Posted` still contains relative text (so we did not break that field):

bash

 Copy code

```
python - <<'PY'
import csv
path = "output/product_owner_jobs_20251229_232135.csv"
with open(path, newline="", encoding="utf-8") as f:
    r = csv.DictReader(f)
    count = 0
    for row in r:
        if (row.get("Posted") or "").lower().startswith("posted "):
            count += 1
    print("rows_with_posted_text:", count)
PY
```

You should see a nonzero count.

One more thing your run surfaced

This line matters:

```
[WARN] [GS] Header on sheet differs from expected fields; appending using
existing header order.
```

Not part of the Posting Date fix, but it is a good follow up ticket because it can cause column misalignment over time. For now, it is not blocking this bug fix.

After the validation passes, commit

bash

 Copy code

```
git status
git add gsheets_utils.py
git commit -m "Fix: prevent Posting Date fallback to Posted"
```

Paste the output of step 3 (the `bad_count` check). If it is `0`, we can call this fix verified for the failure mode you described.



```
(.venv) ange@mac job-scraper % python - <<'PY'
import csv
path =
"output/product_owner_jobs_20251229_232135.csv"
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    for i, name in enumerate(header, 1):
        if name in ("Posted", "Posting Date"):
            print(i, name)
PY

11 Posted
12 Posting Date
(.venv) ange@mac job-scraper % python - <<'PY'
import csv
path =
"output/product_owner_jobs_20251229_232135.csv"
POSTING_DATE_COL = None
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    POSTING_DATE_COL = header.index("Posting Date")
    bad = []
    for row in r:
        v = (row[POSTING_DATE_COL] or "").strip()
        if v.lower().startswith("posted "):
            bad.append(v)
    print("bad_count:", len(bad))
    if bad[:10]:
        print("examples:", bad[:10])
PY

bad_count: 25
```

```
examples: ['Posted 4\x00days ago', 'Posted 1\x00week ago', 'Posted 3\x00days ago', 'Posted 5\x00days ago', 'Posted 1\x00week ago']  
(.venv) ange@mac job-scraper %
```

Great. This result tells us something important.

What the CSV proves

Your `gsheets_utils.py` change worked as intended, but it was aimed at the wrong layer.

- The `Posting Date` column in the CSV is **already populated** with relative text (`Posted 1 week ago`) before anything gets to Google Sheets mapping.
- So the corruption is happening **upstream**, when the row dict is being built, or when the CSV row is being assembled.

That is why you still see:

```
bad_count: 25
```

So we now need to find where `Posting Date` is being set to the `Posted` string (or being copied verbatim).

Next best step

We should locate every place that sets or writes `Posting Date`.

Run these in order.

1) Find assignments and fallbacks for Posting Date

```
bash
```

 Copy code

```
rg -n "Posting Date" -S po_job_scraper.py classification_rules.py gsheets_
```

Now narrow to the most likely patterns:

```
bash
```

 Copy code

```
rg -n "Posting Date.*=" -S po_job_scraper.py classification_rules.py
rg -n "get\\(\"Posting Date\"\\").*get\\(\"Posted\"\\")" -S .
rg -n "Posting Date.*Posted" -S .
```

What we are looking for is any of these:

- `row["Posting Date"] = row["Posted"]`
- `row.get("Posting Date") or row.get("Posted")`
- `Posting Date` being set equal to `posted_text` without parsing

2) Confirm whether CSV writing uses a separate mapping

Search for where the CSV row dict is created or where the CSV is written:

bash Copy code

```
rg -n "DictWriter|writerow|to_csv|product_owner_jobs_|skipped_jobs_" -S po
```

If you find a function that builds the CSV row fields, check what it does for `Posting Date`.

3) Quick truth check on the in memory data (optional but fast)

This tells us whether the bad value exists in memory before writing the CSV.

Search the CSV for one URL, then we can trace that same URL through the code if you have debug prints.

Example for Varicent:

bash Copy code

```
python - <<'PY'
import csv
path = "output/product_owner_jobs_20251229_232135.csv"
target = "workingnomads.com/jobs/senior-product-manager-varicent"
with open(path, newline="", encoding="utf-8") as f:
    r = csv.DictReader(f)
    for row in r:
        if target in row.get("Job URL", ""):
            print("Posted:", row.get("Posted"))
```

```
print("Posting Date:", row.get("Posting Date"))
break
```

PY

If `Posting Date` equals `Posted`, we know exactly what to hunt for in the row assembly.

The smallest correct fix once we find the source

Your user story constraint is strict:

- If it cannot be scraped, it must be blank.
- Do not compute from other data sources like relative Posted text.

So once we find the source assignment, the minimal fix is usually one of these:

Option A: Remove the fallback assignment entirely

If you find something like:

python

Copy code

```
row["Posting Date"] = row.get("Posting Date") or row.get("Posted")
```

Change it to:

python

Copy code

```
row["Posting Date"] = row.get("Posting Date") or ""
```

Option B: Sanitize `Posting Date` right before output

This is a defensive guardrail, useful even after Option A, but it must apply to both Sheets and CSV outputs.

Rule:

- If `Posting Date` starts with `Posted`, blank it.

This is not the primary fix, but it is a good invariant enforcer.

Why your earlier confusion about “same board sometimes correct” makes sense

This is consistent with a pipeline that does:

- sometimes successfully scrape a real date and store it
- sometimes fail to scrape and then fall back to the raw Posted string

That can vary run to run due to page content differences, caching, timing, or selector variability. The key is you do not want any fallback that copies Posted text into Posting Date.

What I need from you

Paste the output of this command:

bash

 Copy code

```
rg -n "Posting Date" -S po_job_scraper.py classification_rules.py gsheets_
```

I will point to the exact lines to change, and we will keep it as a tiny patch like the first one.



```
(.venv) ange@mac job-scraper % rg -n "Posting Date" -S  
po_job_scraper.py classification_rules.py  
gsheets_utils.py
```

```
gsheets_utils.py  
319:     "Posting Date":  
        _normalize_sheet_value(keep_row.get("Posting Date",  
        "")),  
353:     "Posting Date":  
        _normalize_sheet_value(skip_row.get("Posting Date",  
        "")),
```

```
classification_rules.py  
468:   posting_date_str = row.get("Posting Date") or ""
```

```
po_job_scraper.py  
108:     "Posting Date": listing.get("posting_date") or "",  
1615:   # Try to derive Posting Date from visible text  
        (best effort)
```

```
1795:      "Posting Date": posted,
2572:      "Posting Date": """",
2592: # Additional sweep for Posting Date / Valid
Through
2610:      if dp and not details.get("Posting Date"):
2611:          details["Posting Date"] =
parse_date_relaxed(dp)
2614:      if details.get("Posting Date") and
details.get("Valid Through"):
2758:      if details.get("Posted") and not
details.get("Posting Date"):
2759:      details["Posting Date"] = details["Posted"]
3296:      if dp and not details.get("Posting
Date"):
3297:          details["Posting Date"] =
parse_date_relaxed(dp)
3331:      if details.get("Posting Date") and
details.get("Valid Through"):
4576:      "Posting Date",
4963:      "Posting Date",
4997:      "Posting Date",
7761:      posting = (details.get("Posting Date") or "")
8520:      - posting_date / Posting Date / date_posted
8525:      - d["Posting Date"], d["Valid Through"] for CSV
8551:      posting_date_raw = d.get("posting_date") or
d.get("Posting Date") or ""
8584:      d["Posting Date"] = posting_date_str or ""
9035:      "Company","Location","Posted","Posting
Date","Valid Through",
9082:      "Posting Date": row.get("Posting Date",
row.get("posting_date", "")),
9670:      f"Posting
Date='{details.get('Posting Date', '')}' "
9704:      "Posting Date":
details.get("Posting Date","",),
9735:      "Posting Date": details.get("Posting
Date", ""),
9857:      "Posting Date":
keep_row["Posting Date"],
9904:      "Posting Date": "",
```

```
(.venv) ange@mac job-scraper % g -n "Posting Date.*="
-S po_job_scraper.py classification_rules.py
```

zsh: command not found: g

```
(.venv) ange@mac job-scraper % rg -n "Posting Date.*="
-S po_job_scraper.py classification_rules.py
```

po_job_scraper.py

```
2611:         details["Posting Date"] =
parse_date_relaxed(dp)
2759:     details["Posting Date"] = details["Posted"]
3297:         details["Posting Date"] =
parse_date_relaxed(dp)
8584: d["Posting Date"] = posting_date_str or ""
9670:             f"Posting
Date='{details.get('Posting Date', '')}' "
(.venv) ange@mac job-scraper % rg -n "get\\(\"Posting
Date\"\\".*get\\(\"Posted\"\\"\\\" -S .
```

```
(.venv) ange@mac job-scraper % rg -n "Posting
Date.*Posted" -S .
```

./po_job_scraper.py

```
2759:     details["Posting Date"] = details["Posted"]
(.venv) ange@mac job-scraper %
```

Perfect. We have the smoking gun, and it is exactly the behavior you said you do not want.

Root cause

This line in `po_job_scraper.py` is directly copying relative Posted text into Posting Date:

python

 Copy code

```
if details.get("Posted") and not details.get("Posting Date"):
    details["Posting Date"] = details["Posted"]
```

That guarantees that whenever the scraper cannot scrape an absolute posting date, it fills `Posting Date` with `Posted ... ago`.

That matches your CSV evidence (`bad_count: 25`).

Minimal fix that matches your user story

Delete or neutralize that fallback.

Change

Replace the block at or around line 2758 to 2759 with this:

```
python Copy code

# Do not backfill Posting Date from Posted.
# If Posting Date cannot be scraped, it must remain blank.
if not details.get("Posting Date"):
    details["Posting Date"] = ""
```

Or, even leaner, just remove the fallback assignment entirely, if `Posting Date` is already initialized to `""` earlier in the `details` dict (it looks like it often is, based on the other lines you surfaced).

Why this is the correct layer

- Your earlier `gsheets_utils.py` change only stopped Sheets mapping from copying the value.
- The CSV is built from `details` upstream, so we must stop the bad value at its source.

Add one guardrail (recommended, tiny, and aligns with invariants)

You also have this line at:

```
9082: "Posting Date": row.get("Posting Date", row.get("posting_date",
        "")),
```

That is fine, but it will happily pass through “Posted ... ago” if it exists.

So add a defensive check in one place, ideally near wherever you normalize fields for CSV output. You already have normalization logic around 8551 to 8584.

You have:

- 8551: `posting_date_raw = d.get("posting_date") or d.get("Posting Date")`
or `""`
- 8584: `d["Posting Date"] = posting_date_str or ""`

Add one simple rule there:

- If the raw value starts with `"Posted "` then treat it as blank.

Example patch (fits your constraints, no refactor):

python Copy code

```
posting_date_raw = d.get("posting_date") or d.get("Posting Date") or ""
posting_date_raw = str(posting_date_raw).strip()

if posting_date_raw.lower().startswith("posted "):
    posting_date_raw = ""
```

Then continue into your existing `posting_date_str` parsing and assignment.

This guardrail helps if any other code path accidentally sets `Posting Date` to `Posted`.

Verification steps after the fix

1. Re run the same command you used:

bash Copy code

```
python po_job_scraper.py --only workingnomads --limit-pages 1 --limit-link
```

2. Run the same validation:

bash Copy code

```
python - <<'PY'
import csv, glob
paths = sorted(glob.glob("output/product_owner_jobs_*.csv"))
path = paths[-1]
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    idx = header.index("Posting Date")
```

```
bad = []
for row in r:
    v = (row[idx] or "").strip()
    if v.lower().startswith("posted "):
        bad.append(v)
print("file:", path)
print("bad_count:", len(bad))
print("examples:", bad[:10])
PY
```

Expected:

- bad_count: 0

Commit

Once it passes:

bash

 Copy code

```
git add po_job_scraper.py gsheets_utils.py
git commit -m "Fix: keep Posting Date blank when not scraped"
```

Quick note about your earlier gsheets_utils change

Keep it. It is still correct behavior, because even if some upstream bug happens again, Sheets will not silently backfill Posting Date from Posted.

If you paste `sed -n '2735,2775p' po_job_scraper.py`, I will tell you the exact edit to make with minimal line movement, so the diff stays clean.



[2025-12-30 00:16:15] [INFO]	[.GS] Pushed 27
rows to tab 'Table1'.	
[2025-12-30 00:16:18] [INFO]	[.GS] Pushed 23
rows to tab 'Skipped'.	
[2025-12-30 00:16:18] [INFO]	[Playwright
success 53, failures 0, fallbacks 0	

```
[2025-12-30 00:16:18] [DONE] .Kept 27,
Skipped 23 in 822s
[2025-12-30 00:16:18] [DONE] ].CSV:
output/product_owner_jobs_20251230_000235.csv
[2025-12-30 00:16:18] [DONE] ].CSV:
output/skipped_jobs_20251230_000235.csv
(.venv) ange@mac job-scraper %
python - <<'PY'
import csv, glob
paths =
sorted(glob.glob("output/product_owner_jobs_*.csv"))
path = paths[-1]
with open(path, newline="", encoding="utf-8") as f:
    r = csv.reader(f)
    header = next(r)
    idx = header.index("Posting Date")
    bad = []
    for row in r:
        v = (row[idx] or "").strip()
        if v.lower().startswith("posted "):
            bad.append(v)
print("file:", path)
print("bad_count:", len(bad))
print("examples:", bad[:10])
PY
```

```
file: output/product_owner_jobs_20251230_000235.csv
bad_count: 0
examples: []
(.venv) ange@mac job-scraper % git add
po_job_scraper.py gsheets_utils.py
git commit -m "Fix: keep Posting Date blank when not
scraped"
```

[fix/posting-date-field-integrity 69a11ed] Fix: keep

Posting Date blank when not scraped
 2 files changed, 8 insertions(+), 8 deletions(-)
 (.venv) ange@mac job-scraper %

✓ Nice. That run is the verification we needed.

What we can now say is true

- The latest CSV (`output/product_owner_jobs_20251230_000235.csv`) contains zero `Posting Date` values that start with `Posted`.
 Your check returned `bad_count: 0`, which directly validates the user story constraint.
- You committed the fix successfully on `fix/posting-date-field-integrity`:
 - Commit: `69a11ed`
 - Files touched: `po_job_scraper.py`, `gsheets_utils.py`
 - Change footprint: small and clean (8 insertions, 8 deletions)

What to do next (branch hygiene and finish the build)

Run these:

```
bash Copy code  
  

git status
git push -u origin fix/posting-date-field-integrity
```

If you want to be extra disciplined, do one non affected check (per your DoD idea):

```
bash Copy code  
  

python po_job_scraper.py --only dice --limit-pages 1 --limit-links 10
```

Then optionally run the same `bad_count` script against that newest CSV too.

Update to your SOW prompt document (the bit you said was missing)

Add this as a reusable checklist item right after "Define failing case and expected behavior" and before "start a new build":

- Locate the corrupting layer:** confirm whether the bad value exists in the CSV output, Google Sheets output, or only UI

- **Search for field fallbacks:** ripgrep for any assignment or fallback logic that copies sibling fields into the target field
- **Fix at the source, then add a thin guardrail at output** (only if needed)

In your case, the culprit was literally:

- `details["Posting Date"] = details["Posted"]`

That is exactly the kind of pattern that belongs in a "look for this" checklist.

If you paste your updated prompt section later, I can tighten the wording so it reads like the rest of your doc and stays lean.

