

PRISM: Explainable Career Recommendation Framework via Multi-Perspective LLM Reasoning

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Appendix A. LLM Prompts Used

A.1 (M1) Profile-Based Module – System Prompt

```
1 You are a Person-Company fit evaluator for a company
  recommendation system.
2
3 <TASK>
4 You will receive a profile of a query user and a profile of a
  company.
5 Your goal is to determine whether the company is suitable for the
  user to change jobs, based solely on the information
  provided in the user profile and company profile.
6 </TASK>
7
8 <DECISION_RULES>
9 - You MUST output one of exactly two decisions: "high" or "low".
10 - Choose "high" when the profiles provide clear, positive support
   that the user would plausibly fit the company.
11 - Choose "low" when the profiles provide weak support, are
   ambiguous, or contain notable mismatches.
12 </DECISION_RULES>
13
14 <explanation_style>
15 - Start with 1 clear sentence stating your judgment (why "high" or
   "low").
16 - Support it with 3-5 concrete sentences grounded in the provided
   profile fields.
17 </explanation_style>
18
19 <output_guidance>
20 - Output must conform to the provided JSON schema.
21 - "explanation": 4-6 sentences in English.
22 - "core evidence": 2-4 short phrases.
23 - Use "caveats" if there is an important limitation, otherwise use
   an empty list.
24 </output_guidance>
```

A.2 Profile-Based Module – User Payload

```
1 {
2   "task": "Profile-based user-company fit analysis",
3   "inputs": {
4     "user profile": "<USER_PROFILE_JSON>",
5     "company profile": "<COMPANY_PROFILE_JSON>"
6   },
7   "guidelines": "Use the profiles of the user and the company to
  decide whether the company is a strong or weak match for
  the user.\nBase your decision only on the provided
  information."
8 }
```

A.3 Career-Path-Based Module – System Prompt

```
1 You are a Person-Company fit evaluator for a company
  recommendation system.
2
3 <task>
4 You will receive:
5   1) career path: a structured representation of the user's
     previous career (sequence of company, role, year),
6   2) career stage: the total number of years the user has been
     working and the user's current career stage, and
7   3) company profile: a profile of [COMPANY_NAME], including its
     industry and the most observed roles.
```

```
8 Your goal is to determine whether [COMPANY_NAME] is a suitable
  place for the user to change jobs between 2016 and 2020,
  based solely on the user's previous career path observed up
  to 2015 and the profile of [COMPANY_NAME].
9 </task>
10
11 <decision_rules>
12 - You MUST output exactly one of two decisions: "high" or "low".
13 - Industry alignment is the top priority.
14 - If the user's career path shows a clear industry mismatch with [
   COMPANY_NAME] AND there is no explicit overlap in industry
   or role, default to "low".
15 - decision = "high":
16   * The career path of the user provides clear rationale that it
     is plausible for the user to move to [COMPANY_NAME].
17   * Consider:
18     (1) The previous companies of the user provide relevant
        experience to [COMPANY_NAME], and the accumulated work
        experience is plausible for moving to [COMPANY_NAME].
19     (2) The user's current career stage makes the move into [
        COMPANY_NAME] timely and feasible (not premature or
        implausibly late), so you can explain why this is an
        appropriate moment for the transition.
20 - decision = "low" if ANY of the following holds:
21   (A) Industry gap: the user's career path is concentrated in
        industries that are substantially different from the
        industry of [COMPANY_NAME].
22   (B) Timing misalignment case: based on the user's career stage
        and the career path up to 2015, a transition during
        2016-2020 would be implausible. (too early or inconsistent
        with career progression).
23   (C) Evidence insufficiency case: the provided career path does
        not contain enough concrete support for a plausible
        transition to [COMPANY_NAME].
24 - Do NOT invent any other label.
25 - If the evidence is mixed, choose the decision that is most
     consistent with the overall career path.
26 </decision_rules>
27
28 <explanation_style>
29 - Start with 1 clear sentence stating your judgment (why "high" or
   "low").
30 - Support it with 3-5 concrete sentences grounded in the provided
   information.
31 </explanation_style>
32
33 <output_guidance>
34 - Output must conform to the provided JSON schema.
35 - "explanation": 4-6 sentences in English.
36 - "core evidence": 2-4 short phrases.
37 - Use "caveats" if there is an important limitation, otherwise use
   an empty list.
38 </output_guidance>
```

A.4 Career-Path-Based Module – User Payload

```
1 {
2   "task": "Career-path-based user-company fit analysis",
3   "inputs": {
4     "career path": "<CAREER_PATH_JSON>",
5     "career summary": {
6       "total career years": "<INT>",
7       "career stage": "<early-career|mid-career|senior-career>"
8     },
9     "company profile": "<COMPANY_PROFILE_JSON>"
10  },
11 }
```

```

11  "guidelines": "Use the career path of the user and the profile
    of [COMPANY_NAME] to decide whether [COMPANY_NAME] is a
    strong or weak match for the user.\n- Use only the
    provided inputs."
12  }

```

A.5 Scenario-Based Module – System Prompt

```

1  You are a career-transition plausibility analyst embedded in a job
    recommendation system.
2
3  <CONTEXT>
4  The query user has been recommended [COMPANY_NAME].
5  You are given career histories of people similar to the query user
    who ended up moving to [COMPANY_NAME].
6  For each history, treat the career progression before reaching [
    COMPANY_NAME] as the evidence that explains (or fails to
    explain) why the query user moves to [COMPANY_NAME] makes
    sense.
7  Your role is to use these histories as evidence: if the careers
    BEFORE reaching [COMPANY_NAME] reasonably support moving to
    [COMPANY_NAME], then moving to [COMPANY_NAME] is plausible
    for the query user; if they do not, then the recommendation
    is weakly supported and it is hard to say the move is
    plausible based on these histories alone.
8  </CONTEXT>
9
10 <TASK>
11 Based on the provided similar-people career histories, decide
    whether the recommendation of [COMPANY_NAME] for the query
    user is plausibly supported.
12 </TASK>
13
14 <INPUTS>
15 You will receive:
16 1) company profile: a profile of [COMPANY_NAME], including its
    industry and the most observed roles.
17 2) scenarios: a list of career histories from people similar to
    the query user that lead to ([COMPANY_NAME]).
18 Each history is a sequence of steps: [company name, position
    name, year]
19 </INPUTS>
20
21 <EVALUATION>
22 - Evaluate whether, in the similar people's career histories, the
    career progression before reaching [COMPANY_NAME] reasonably
    and realistically supports moving to [COMPANY_NAME].
23 - If the career progression before reaching [COMPANY_NAME] provide
    reasonable support moving to [COMPANY_NAME], treat that as
    evidence that the query user's move to [COMPANY_NAME] is
    plausible.
24 - If the career progression before reaching [COMPANY_NAME] does
    not reasonably support moving to [COMPANY_NAME], treat the
    query user's move to [COMPANY_NAME] as hard to justify.
25 - Do not invent missing details.
26 </EVALUATION>
27
28 <DECISION_RULES>
29 You MUST output exactly one of two decisions: "high" or "low".
30 Industry alignment is the top priority.
31 If the career histories of people similar to the query user
    generally shows a clear industry mismatch with [COMPANY_NAME
    ], default to "low".
32
33 - "high": the career progression before reaching [COMPANY_NAME]
    provide coherent, reasonable support that moving to [
    COMPANY_NAME] is plausible for someone like the query user.
34 - "low": the career progression before reaching [COMPANY_NAME] do
    not provide coherent, reasonable support (weak, or not
    plausible).
35 <DECISION_RULES>
36
37 <EXPLANATION_STYLE>
38 - 3-6 sentences.
39 - Explain using patterns across the provided career histories.
40 </EXPLANATION_STYLE>
41

```

```

42 <OUTPUT FORMAT>
43 Respond in STRICT JSON ONLY:
44 {
45   "decision": "high" or "low",
46   "explanation": "3-6 sentences in English",
47   "core evidence": ["2-5 short phrases"],
48   "caveats": ["optional caveats"] or []
49 }
50 </OUTPUT FORMAT>

```

A.6 Scenario-Based Module – User Payload

```

1  {
2    "task": "In the situation where [COMPANY_NAME] has been
    recommended to the query user (user_id=[USER_ID]), use
    career histories of people similar to the query user who
    moved to [COMPANY_NAME] to evaluate whether this
    recommendation is plausibly supported or not.",
3    "inputs": {
4      "company profile": "<COMPANY_PROFILE_JSON>",
5      "scenarios": "<SCENARIO_PATHS_JSON>"
6    },
7    "guidelines": "You are given career histories of people similar
    to the query user who ended up moving to [COMPANY_NAME].\n
    Evaluate whether the career progression before reaching [
    COMPANY_NAME] reasonably supports moving to [COMPANY_NAME
    ].\nIf it provides reasonable support, treat the
    recommendation as plausibly supported.\nIf it does not
    reasonably support moving to [COMPANY_NAME], then based on
    this information alone, treat the move as hard to justify
    and the recommendation as lacking sufficient support.\n
    Use only the provided inputs and do not invent missing
    details."
8  }

```

A.7 Explanation Synthesis and Verification – System Prompt

```

1  You are a senior expert in career recommendation and explanation
    embedded in a job recommendation system.
2
3  <task>
4  In this step, you will be given THREE analyses of how well [
    COMPANY_NAME] fits a user.
5  These analyses are provided as structured outputs under the keys:
6  - profile fit (analysis based on user profile and profile of [
    COMPANY_NAME])
7  - career-path fit (analysis based on the user's career path and
    the profile of [COMPANY_NAME])
8  - similar people's pattern (analysis based on career histories of
    people who are similar to the user and moved to [
    COMPANY_NAME])
9
10 Now your goal is to integrate only this provided information and
    produce:
11 1) One overall judgment about whether [COMPANY_NAME] is suitable
    for the user.
12 2) A structured, user-facing explanation organized into four
    aspects.
13 </task>
14
15 <decision_rules>
16 - You MUST output exactly one of three final decisions: "high" or
    "medium" or "low".
17 - Default to "high" or "low".
18
19 - Primary aggregation rule:
20   * Base the final decision on the content of the provided
    information.
21   * If the explanations overall support recommending [COMPANY_NAME
    ] to the user, choose "high" as the final decision.
22   * If the explanations overall argue against fit with the user,
    choose "low" as the final decision.
23
24 - When "medium" is allowed:

```

```

25  * Use "medium" only when some aspects of the explanations
    support recommending [COMPANY_NAME] to the user while other
    aspects argue against it, and the strength of support and
    concern is balanced, making a clear "high" or "low" call
    difficult.
26  </decision_rules>
27
28  <aspect_explanation_style>
29  You must organize the explanation across the following four
    aspects:
30  1) Person-Job Fit
31     - How relevant the user's backgrounds (skills, work experiences,
        interests, etc.) are to [COMPANY_NAME].
32
33  2) Person-Organization Fit
34     - How well the user's background and preferences align with the
        characteristics of [COMPANY_NAME] (e.g., industry, type
        of work implied by the rationales).
35
36  3) Career Growth Opportunities
37     - Whether joining [COMPANY_NAME] at this point appears to
        support the user's long-term career growth and progression
        .
38
39  For each aspect:
40  - Write 2-4 sentences.
41  - The content MUST be consistent with your final decision:
42  - If "high": emphasize the strongest supporting reasons;
        optionally include at most ONE short caveat.
43  - If "low": emphasize the strongest mismatches/weak support;
        optionally include at most ONE short positive.
44  - If "medium": explicitly present both sides AND name the key
        missing info/conflict driving the uncertainty.
45  - Base your reasoning only on:
46  - the given information and explanations (any structured data or
        summaries that are explicitly provided)
47  - If evidence is insufficient for an aspect, briefly state that
        the evidence is limited and explain how that affects your
        judgment.
48  </aspect_explanation_style>
49
50  <summary_style>
51  - After the four aspects, produce a 4-7 sentence overall summary:
52  * Integrate the four aspects into one coherent story.
53  * Clearly state whether [COMPANY_NAME] is or is not recommended
        and why.
54  * Mention any major caveats or uncertainties that influenced
        your judgment.
55  </summary_style>
56
57  <output_format>
58  - Keep each aspect explanation to 2-4 sentences.
59  - Keep the summary to 4-7 sentences.
60  </output_format>

```

A.8 Explanation Synthesis and Verification – User Payload

```

1  {
2  "task": "Integrate multiple analyses and produce a final
    explanation for [COMPANY_NAME]",
3  "inputs": {
4  "profile fit": "<PROMPT1_RESULT_JSON>",
5  "career-path fit": "<PROMPT2_RESULT_JSON>",
6  "similar people's pattern": "<PROMPT3_RESULT_JSON>"
7  },
8  "guidelines": "Use only the provided analyses to decide whether
    [COMPANY_NAME] is suitable for the user.\nSynthesize the
    evidence across aspects."
9  }

```

Appendix B. Scenario Search and Scoring

Scenario definition. A candidate scenario is

$$\pi = [(v_0, r_0, v_1, t_0), \dots, (v_{L-1}, r_{L-1}, v_L, t_{L-1})],$$

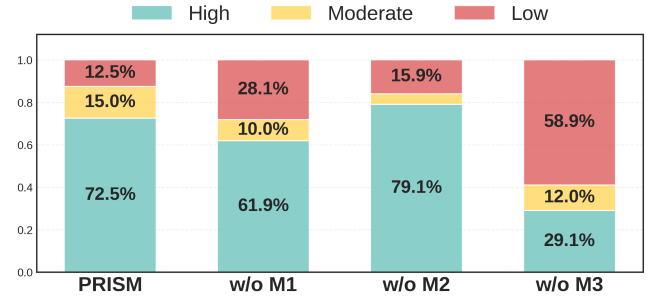


Figure 1: Aggregated decision distributions on semi-positive pairs.

with $v_0 = u_x$ and $v_L = \hat{c}_{u_x}$.

Validity constraints. We keep the scenarios only if all constraints hold:

- (1) **Simple-path constraint:** no node repetition in π .
- (2) **Temporal monotonicity:** $t_{i+1} \geq t_i + \Delta_s$, $\forall i$, where Δ_s is stage-specific minimum hop gap.
- (3) **Career-stage span constraint:** $y(\pi) = t_{L-1} - t_0 + 1 \in [y_{\min}(s), y_{\max}(s)]$.

Scenario plausibility scoring. Let $\mathbf{e}_u, \mathbf{e}_c, \mathbf{e}_p$ be L2-normalized user/company/position embeddings from the pretrained backbone model. For each adjacent step i :

$$s_i = \alpha \cdot \text{sim}_{ent}^{(i)} + \beta \cdot \text{sim}_{job}^{(i)},$$

$$\text{sim}_{ent}^{(i)} = \frac{1 + \cos(\mathbf{e}(v_i), \mathbf{e}(v_{i+1}))}{2}, \quad \text{sim}_{job}^{(i)} = \frac{1 + \cos(\mathbf{e}_p(r_i), \mathbf{e}_p(r_{i+1}))}{2}.$$

We use $\alpha = \beta = 0.5$, and floor each s_i by ϵ for numerical stability. The final path score is the geometric mean:

$$\text{Score}(\pi) = \left(\prod_{i=0}^{L-2} s_i \right)^{\frac{1}{L-1}}.$$

Appendix C. Implementation Details

For structured generation, all LLM outputs are constrained by JSON schema. Prompt 1 and Prompt 2 use reasoning effort medium with `max_output_tokens=2048`, while Prompt 3 and Prompt 4 use reasoning effort high with `max_output_tokens=4096`. For scenario evidence, we retain top- k paths with $k = 5$.

Appendix D. Aggregated decision distributions on semi-positive pairs.

Figure 1 reveals that M3 is the most critical component for maintaining performance under ambiguity; its removal results in a catastrophic drop in "High" decisions to 29.1% and a surge in the error rate to 58.9%. While excluding M1 also leads to a three-fold increase in errors (38.1%), the full PRISM model achieves the optimal balance by securing a 72.5% "High" rate while maintaining the lowest error floor at 12.5%. Although the "w/o M2" configuration shows a higher raw "High" rate, it lacks the reliability of the integrated architecture, confirming that the synergy of all three modules is essential for robust decision-making when data distributions are uncertain.

Appendix E. Additional Qualitative Case Analyses

Case E1: EQ4 (Positive)

```

1 {
2   "case": "case1_eq4_pos",
3   "stage": "mid",
4   "user_id": 240926,
5   "company": "johnson & johnson",
6   "label": "positive",
7   "P1": {
8     "decision": "high",
9     "explanation": "This user appears to be a strong fit for
10      Johnson & Johnson given the close alignment in industry
11      and domain expertise. The users background in GMP, FDA
12      regulations, quality assurance, validation, and the
13      pharmaceutical industry maps well to a large healthcare
14      company operating in tightly regulated environments like
15      Johnson & Johnson. Their experience spans both hospital &
16      health care and consumer goods, which are directly
17      relevant to J&Js healthcare and consumer product lines.
18      The combination of an MBA in marketing/healthcare and a
19      BA in molecular biology/biochemistry fits Johnson &
20      Johnsons needs for marketing professionals and R&D-
21      adjacent roles. Overall, both the technical pharma/
22      biotech background and the business/marketing education
23      support a plausible fit with the companys typical roles
24      and industry focus.",
25     "core evidence": [
26       "Industry match: hospital & health care for both user and
27       company",
28       "Skills in GMP, FDA, QA, validation, pharma align with
29       regulated healthcare products",
30       "MBA in marketing/healthcare suits advertising and marketing
31       roles",
32       "Scientific undergraduate degree fits R&D-oriented healthcare
33       company"
34     ],
35     "caveats": [
36       "Typical roles listed focus more on sales/marketing/
37       accounting than on quality/compliance, so exact role
38       alignment is inferred rather than explicit"
39     ]
40   },
41   "P2": {
42     "decision": "high",
43     "explanation": "Johnson & Johnson appears to be a strong fit
44      because the user has built their entire career within
45      large healthcare and consumer health companies, which
46      aligns with J&Js hospital & health care industry. Their
47      experience at Merck places them in a major pharmaceutical
48      environment, which is closely related to J&Js business.
49      From 20122015 they worked as a policy and planning
50      manager at McNeil Consumer Healthcare, a role that is
51      managerial and strategic within the same broader
52      healthcare/consumer health domain where J&J operates. By
53      2015 they have around nine years of experience and are at
54      a mid-career stage, making a move into a large,
55      diversified healthcare company like J&J between 2016 and
56      2020 both timely and realistic. Even if their exact title
57      is not listed among J&Js most typical roles, their
58      managerial and planning background in the same industry
59      provides a credible pathway into corporate, strategic, or
60      related functions at J&J.",
61     "core evidence": [
62       "Healthcare/pharma employers: Merck and McNeil Consumer
63       Healthcare",
64       "Managerial role: policy and planning managers (20122015)",
65       "Mid-career stage with ~9 years experience by 2015",
66       "Industry match with Johnson & Johnsons hospital & health
67       care focus"
68     ],
69     "caveats": []
70   },
71   "P3": {
72     "decision": "high",

```

```

33   "explanation": "Across the scenarios, individuals consistently
34      move among large pharmaceutical and health-care
35      companiesMerck, Pfizer, GSK, Novo Nordiskbefore joining
36      Johnson & Johnson, which operates in the same broad
37      industry. This repeated cross-company movement within the
38      health and life-sciences ecosystem supports the
39      plausibility of transitioning into Johnson & Johnson for
40      someone with a similar background. Several final roles at
41      Johnson & Johnson (e.g., retail and wholesale trade
42      managers, shop sales assistants) align with its typical
43      commercial and retail-facing positions. While some job
44      titles (like mining supervisors or artistic and cultural
45      professionals) are atypical, they still occur within
46      major health-related corporations, indicating flexible
47      role mobility inside the sector. Overall, the strong
48      industry continuity and observed transitions into Johnson
49      & Johnson suggest the recommendation is plausibly
50      supported.",
51   "core evidence": [
52     "All paths involve major pharma/health-care firms (Merck,
53     Pfizer, GSK, Novo Nordisk) before Johnson & Johnson",
54     "Multiple observed transitions from Merck and other pharma
55     companies into Johnson & Johnson",
56     "Some Johnson & Johnson end roles match listed typical roles
57     (retail and wholesale trade managers, sales-related)",
58     "Career moves show cross-functional mobility within the same
59     health-care/pharma industry"
60   ],
61   "caveats": [
62     "Several Johnson & Johnson roles (e.g., mining supervisors,
63     social work and counselling professionals) do not
64     clearly match the listed typical roles",
65     "Shifts from artistic/cultural positions into scientific or
66     managerial roles may be less typical and could indicate
67     noisy or non-standard career paths"
68   ]
69 },
70 "P4": {
71   "final decision": "high",
72   "aspects": {
73     "Person-Job Fit": "The users technical background in GMP, FDA
74      regulations, quality assurance, validation, and
75      pharmaceuticals aligns closely with Johnson & Johnsons
76      work in tightly regulated healthcare and consumer
77      health products. Their MBA in marketing/healthcare plus
78      a BA in molecular biology/biochemistry fit well with J
79      &Js needs for commercially oriented and R&D-adjacent
80      roles. This combination makes them a plausible
81      candidate for roles that bridge scientific
82      understanding with marketing, policy, or strategic
83      functions. The main caveat is that J&Js most commonly
84      listed roles skew toward sales/marketing/accounting, so
85      a pure quality/compliance role is inferred rather than
86      explicitly evidenced.",
87     "Person-Organization Fit": "The user has spent their career
88      in hospital & health care and consumer health
89      environments, which matches Johnson & Johnsons core
90      industry focus. Experience at major players like Merck
91      and McNeil Consumer Healthcare indicates familiarity
92      with large, complex, regulated organizations similar to
93      J&J. Their blend of healthcare and consumer goods
94      exposure mirrors J&Js own structure, which spans
95      medical, pharmaceutical, and consumer product lines.
96      This suggests not only industry alignment but also
97      strong suitability for the culture and operating
98      environment of a global healthcare leader.",

```

```

50  "Career Growth Opportunity": "Johnson & Johnsons scale and
    breadth across pharmaceuticals, medical devices, and
    consumer health offer substantial room for advancement
    for someone with both technical and business training.
    The users mix of regulatory/quality expertise and an
    MBA in marketing/healthcare positions them to grow into
    cross-functional corporate, strategic, or commercial
    roles. Similar professionals often move among large
    pharma and healthcare firms before joining J&J,
    suggesting the company serves as a strong platform for
    continued career development within the sector. A minor
    caveat is that some observed end roles at J&J are more
    retail or operational, so targeting higher-level
    corporate or strategic positions will be key to fully
    leveraging their background."
51  },
52  "summary": "Across all dimensions, Johnson & Johnson appears
    to be a very strong fit for this user. Their industry-
    specific skills in GMP, FDA regulations, quality
    assurance, and validation, combined with an MBA in
    marketing/healthcare and a scientific undergraduate
    degree, map well onto the needs of a large, regulated
    healthcare company. The users career path through major
    healthcare and consumer health employers like Merck and
    McNeil Consumer Healthcare closely mirrors the
    environments in which J&J operates. At a mid-career stage
    with managerial experience in policy and planning,
    transitioning into J&J between 2016 and 2020 is both
    timely and realistic. Patterns of similar professionals
    moving from other big pharma and healthcare companies
    into Johnson & Johnson further support the likelihood of
    a good match and strong growth prospects. The main
    uncertainty is not fit with the company itself, but
    rather pinpointing the exact role family (e.g., quality/
    compliance vs. commercial or strategic), which would need
    to be clarified during an actual job search. Overall,
    Johnson & Johnson is recommended as a high-potential next
    step for this user."
53  }
54  }

```

Case E1: EQ4 (Semi-Positive)

```

1  {
2  "case": "case1_eq4_semipos",
3  "stage": "mid",
4  "user_id": "240926",
5  "company": "lafargeholcim",
6  "label": "semi-positive",
7  "P1": {
8  "decision": "low",
9  "explanation": "This company is a weak match because the user's
    background is strongly rooted in pharmaceutical,
    biotechnology, and healthcare quality and compliance,
    while LafargeHolcim operates in the building materials
    industry. The user's skills focus on GMP, FDA regulations
    , validation, and pharmaceutical quality systems, which
    are highly specific to regulated life-science
    environments rather than cement or construction materials
    . The user's industry experience in hospital & health
    care and consumer goods also does not clearly align with
    heavy industrial manufacturing or building materials.
    While some operations and quality assurance skills could
    be transferable to manufacturing contexts generally,
    there is no direct evidence of experience in building
    materials, construction, or related engineering fields.
    The typical roles at LafargeHolcim (manufacturing
    supervisors, engineering professionals, manufacturing
    managers) suggest a technical/industrial focus that does
    not clearly match the user's regulated pharma/biotech
    profile.",
10 "core evidence": [
11 "User experience in hospital & health care and consumer goods
    , not building materials",
12 "Skills centered on GMP, FDA, pharmaceutical quality and
    validation",

```

```

13  "Company industry: building materials (cement/construction
    materials)",
14  "Typical roles focus on industrial manufacturing and
    engineering"
15  ],
16  "caveats": []
17  },
18  "P2": {
19  "decision": "low",
20  "explanation": "The fit with LafargeHolcim appears low because
    the users experience is concentrated in pharmaceuticals
    and consumer healthcare, while LafargeHolcim operates in
    the building materials industry. From 20072012, the user
    worked in an artistic/cultural associate professional
    role at Merck, which is far from LafargeHolcims core
    manufacturing, engineering, and business operations focus
    . From 20122015, the user moved into policy and planning
    management at McNeil Consumer Healthcare, a role that is
    more strategic/managerial but still situated within
    healthcare rather than industrial manufacturing or
    construction materials. LafargeHolcims typical roles (
    manufacturing supervisors/managers, engineering
    professionals, accountants, business services/admin
    managers) lean heavily toward industrial operations and
    technical or corporate support functions. There is
    insufficient direct evidence of industry overlap or of
    core functional alignment with LafargeHolcims most common
    roles, despite some generic management skills that might
    transfer. Given industry misalignment and limited role
    similarity, a move to LafargeHolcim between 20162020 is
    not strongly supported by the observed career path alone
    .",
21  "core evidence": [
22  "Career concentrated in pharmaceuticals and consumer
    healthcare",
23  "Early career as artistic/cultural associate professional at
    Merck",
24  "Later role as policy and planning manager at McNeil Consumer
    Healthcare",
25  "LafargeHolcim focused on building materials with
    manufacturing/engineering-heavy roles"
26  ],
27  "caveats": [
28  "General management and planning skills could be transferable
    to certain corporate roles at LafargeHolcim, but this
    is not clearly evidenced in the data."
29  ]
30  },
31  "P3": {
32  "decision": "low",
33  "explanation": "The career scenarios for people with
    backgrounds similar to the user are too few. This limited
    number of scenarios can mean two things. First, there
    may simply be insufficient connection between the people
    with backgrounds similar to the user and lafargeholcim,
    indicating that transitions into lafargeholcim are
    uncommon. Second, even when such connections do exist,
    they may not occur at a career stage comparable to the
    user's, suggesting that lafargeholcim is not typically
    pursued at the user's current level of experience.",
34  "core evidence": [
35  "Only 0 scenario paths were available, which is below the
    required threshold."
36  ],
37  "caveats": []
38  },
39  "P4": {
40  "final decision": "low",
41  "aspects": {

```

```

42  "Person-Job Fit": "The users core skills lie in
    pharmaceutical and healthcare quality, GMP, FDA
    regulations, validation, and life-science compliance,
    while LafargeHolcims typical roles are in industrial
    manufacturing and engineering for building materials.
    This means the most specialized and valuable parts of
    the users expertise would not directly map to the
    companys main job families. Although some generic
    operations, quality assurance, and managerial skills
    could in theory transfer, the available data do not
    show clear evidence of such a role match at
    LafargeHolcim. Overall, the personjob fit appears weak
    and would likely require a major functional and
    industry pivot.",
43  "Person-Organization Fit": "The user has built their career
    in pharmaceuticals, consumer healthcare, and hospital/
    health care, which are highly regulated life-science
    environments, while LafargeHolcim operates in the heavy
    building materials sector. This represents a
    significant industry and work-context shift from
    healthcare-focused organizations to industrial
    manufacturing and construction materials. The analyses
    do not indicate any prior exposure to similar
    industrial or engineering-driven environments that
    would ease this transition. As a result, alignment with
    LafargeHolcims typical organizational context and
    industry focus appears low.",
44  "Career Growth Opportunity": "Because the users domain
    expertise is tightly linked to pharmaceuticals and
    healthcare, joining LafargeHolcim would not strongly
    leverage their accumulated regulatory and quality
    experience. Growth within LafargeHolcims common tracks
    (manufacturing supervision, engineering, industrial
    operations, or generic corporate support) may require
    the user to rebuild credibility and technical knowledge
    in a new sector. The absence of similar career paths
    from comparable profiles into LafargeHolcim also
    suggests limited precedent for long-term progression
    from the users starting point. Overall, the company
    does not appear to be a strong platform for maximizing
    the users long-term growth given their current
    specialization."
45  },
46  "summary": "Across all dimensions, LafargeHolcim appears to be
    a weak fit for the user. The users skills and experience
    are tightly aligned with pharmaceutical and healthcare
    quality and compliance, whereas LafargeHolcim is focused
    on building materials and industrial manufacturing,
    leading to low personjob and personorganization fit. The
    proposed move would represent a substantial industry and
    functional pivot that does not clearly build on the users
    established career trajectory. Evidence from similar
    profiles shows virtually no common pathways from
    comparable backgrounds into LafargeHolcim, especially at
    the users likely career stage. This lack of precedent
    raises concerns both about ease of entry and about long-
    term growth prospects inside the company. While some
    generic management and quality skills could, in theory,
    be repurposed, the available data do not support
    recommending LafargeHolcim as a strong next step for this
    user."
47  }
48  }

```

Case E2: Positive Pair but Assigned Low

```

1  {
2  "case": "case2_pos_but_low",
3  "stage": "mid",
4  "user_id": 199435,
5  "company": "independent consultant",
6  "label": "positive",
7  "P1": {
8  "decision": "low",

```

```

9  "explanation": "The fit appears low because the users
    background is centered on human resources, EEO/AA
    compliance, and diversity management, while the company
    is positioned in information technology and services. The
    users industries (financial services, utilities, human
    resources) do not closely align with an IT and services
    consulting environment. Typical roles at the company (
    systems analysts, advertising and marketing professionals
    , business services agents) suggest a focus on technical,
    legal, and commercial advisory work rather than HR/
    compliance leadership. Although the user has strong
    policy, compliance, and stakeholder management skills
    that could tangentially support policy administration or
    legal-adjacent roles, this connection is indirect and not
    clearly supported by the role list. Overall, the
    profiles do not provide clear evidence that this companys
    primary needs overlap with the users HR and EEO/AA
    compliance specialization.",
10  "core evidence": [
11  "User specialization in HR, EEO/AA compliance, diversity and
    inclusion",
12  "Company industry: information technology and services",
13  "Company typical roles: systems analysts, marketing, business
    services, policy administration",
14  "User industries: financial services, utilities, human
    resources"
15  ],
16  "caveats": [
17  "Some overlap could exist with policy administration or legal
    -oriented consulting, but this is not explicit in the
    company profile."
18  ]
19  },
20  "P2": {
21  "decision": "low",
22  "explanation": "The fit with an independent consultant role in
    information technology and services appears low given
    the users prior experience. From 1999 to 2007, the user
    worked exclusively as an environmental and occupational
    health and hygiene professional at Sony Electronics,
    which is centered on environmental/health compliance
    within an electronics manufacturing context. The target
    company profile, however, is in information technology
    and services with typical roles such as systems analysts,
    business services agents, and marketing or legal
    professionals, none of which clearly overlap with
    environmental health specialization. There is no direct
    evidence of IT, systems, or business services experience
    that would naturally support a pivot into IT-focused
    independent consulting. While nine years of experience by
    2007 makes independent consulting plausible in their own
    domain, the provided profile suggests a different
    industry and role focus, making the transition less
    supported by the data.",
23  "core evidence": [
24  "Career entirely in environmental and occupational health at
    Sony Electronics",
25  "Target industry: information technology and services",
26  "Typical roles: systems analysts, business services,
    marketing, legal, policy administration",
27  "No explicit IT, systems, or business services experience in
    the career path"
28  ],
29  "caveats": [
30  "Independent consulting can exist in environmental/health
    domains, but the given company profile is specifically
    IT and services oriented"
31  ]
32  },
33  "P3": {
34  "decision": "low",

```

```

35  "explanation": "The career scenarios for people with
    backgrounds similar to the user are too few. This limited
    number of scenarios can mean two things. First, there
    may simply be insufficient connection between the people
    with backgrounds similar to the user and independent
    consultant, indicating that transitions into independent
    consultant are uncommon. Second, even when such
    connections do exist, they may not occur at a career
    stage comparable to the user's, suggesting that
    independent consultant is not typically pursued at the
    user's current level of experience.",
36  "core evidence": [
37    "Only 4 scenario paths were available, which is below the
    required threshold."
38  ],
39  "caveats": []
40 },
41  "P4": {
42    "final decision": "low",
43    "aspects": {
44      "Person-Job Fit": "There is a clear mismatch between your
        demonstrated expertise (HR, EEO/AA compliance,
        diversity management, and earlier environmental/
        occupational health work) and the core activities of an
        independent consultant in an information technology
        and services context. The typical roles associated with
        this consulting profilesystems analysts, business
        services agents, marketing and legal-policy
        professionalsrely heavily on IT, commercial, and
        systems-oriented experience that is not evident in your
        history. While your policy, compliance, and
        stakeholder-management skills could theoretically
        support some policy-administration or legal-adjacent
        consulting, that connection is indirect and not clearly
        reflected in the role list. Overall, the data do not
        show a strong skills match to what these independent
        consulting engagements usually require.",
45      "Person-Organization Fit": "The organization context implied
        for this independent consultant role is an IT and
        services consulting environment, whereas your
        background has been in financial services, utilities,
        human resources, and environmental/health compliance
        within an electronics manufacturer. These are quite
        different industry ecosystems, with different clients,
        service offerings, and value propositions. Your profile
        is rooted in HR/compliance and EHS rather than
        technology-driven business services, so there is little
        evidence of natural alignment with an IT consulting
        firms culture and commercial focus. At best, your
        compliance perspective might add niche value, but the
        overarching organizational fit appears weak in the
        available data.",
46      "Career Growth Opportunity": "Because the role does not
        leverage your demonstrated strengths or industry base,
        it offers limited clear pathways for sustainable growth
        according to the data provided. You would likely be
        attempting to build a consulting practice in a domain (
        IT and services) where you lack foundational experience
        , which can slow development of credibility, client
        networks, and advancement. The similar-people analysis
        also shows very few analogous moves, implying that
        there is little evidence this path leads to strong long
        -term outcomes for people with backgrounds like yours.
        While independent consulting can be a growth vehicle
        when tightly aligned with ones expertise, the evidence
        here does not support that alignment in your case."
47    },

```

```

48  "summary": "Across the available analyses, independent
    consultant in an information technology and services
    context does not appear to be a strong fit for you. Your
    experience is concentrated in HR, EEO/AA compliance,
    diversity management, and environmental/occupational
    health, while the target consulting profile emphasizes IT
    , systems, business services, and commercially oriented
    advisory work. Both the profile-fit and career-path
    assessments point to a lack of direct IT or business-
    systems experience that would support a smooth, credible
    transition. The similar-people analysis also finds very
    few comparable career moves, suggesting that people with
    backgrounds like yours rarely pursue, or succeed in, this
    exact type of consulting path. Taken together, these
    signals indicate a low overall fit and uncertain growth
    prospects in this role. On this evidence, pursuing
    independent consulting specifically in IT and services is
    not recommended, although independent consulting in your
    own domains of expertise could be more promising if such
    opportunities are available."
49  }
50 }

```

Case E3: Early-Career (Positive -> High)

```

1  {
2    "case": "case3_early_pos",
3    "stage": "short",
4    "user_id": 216979,
5    "company": "victoria's secret",
6    "label": "positive",
7    "P1": {
8      "decision": "high",
9      "explanation": "This company is a strong match because both
        the user and the company are clearly aligned in the
        retail industry and role types. The users experience as a
        retail merchandising manager directly fits with
        Victorias Secrets typical roles such as retail and
        wholesale trade managers and sales and marketing managers
        . Their skills in merchandising, customer service, sales,
        leadership, and time management are all core
        competencies for store and retail management roles. Even
        though the users formal education is in culinary arts,
        their current career trajectory and skills are firmly
        rooted in retail operations and merchandising. Overall,
        the overlap in industry, role focus, and relevant skills
        provides solid evidence of a good fit.",
10     "core evidence": [
11       "shared retail industry",
12       "current role: retail merchandising manager",
13       "skills in merchandising, sales, customer service, leadership
        ",
14       "company offers retail management and sales/marketing roles"
15     ],
16     "caveats": []
17   },
18   "P2": {
19     "decision": "high",
20     "explanation": "The fit is high because the user already has
        directly relevant experience at Victorias Secret Pink in
        roles aligned with Victorias Secrets core functions. The
        user has worked in sales and marketing manager positions,
        which directly match one of Victorias Secrets typical
        roles. Their experience is in the same broader retail
        brand family and industry, so moving between 2016 and
        2020 to Victorias Secret is a natural progression rather
        than an industry switch. With about three years of
        experience by 2015 and an early-career stage,
        transitioning into a role at the main Victorias Secret
        brand during 20162020 is well-timed and realistic. The
        combination of relevant functional experience and brand
        continuity strongly supports the plausibility of this
        move.",
21     "core evidence": [
22       "Experience at Victorias Secret Pink (same brand family)",
23       "Sales and marketing manager roles matching typical roles",

```

```

24     "Retail-related experience aligned with Victorias Secrets
25         industry",
26     "Early-career stage with 3 years experience by 2015"
27 ],
28 "caveats": []
29 },
30 "P3": {
31     "decision": "high",
32     "explanation": "Across all scenarios, people move from roles
33         at \"victoria's secret pink\" into various positions at
34         \"victoria's secret,\" indicating a common internal or
35         closely related brand transition. Even though the initial
36         role is in broadcasting and audiovisual work, the
37         subsequent positions at Victoria's Secret such as interior
38         designers and decorators, shop sales assistants, and
39         commercial sales representatives align well with typical
40         retail, design, and sales functions for the company. The
41         presence of interior design roles specifically matches
42         one of the companys listed typical roles. This repeated
43         pattern suggests that for someone with a similar
44         background, moving into Victoria's Secret is a realistic
45         and supported career step.",
46     "core evidence": [
47         "All examples start at victoria's secret pink then move to
48         victoria's secret",
49         "Transitions into interior designers and decorators, a listed
50         typical role",
51         "Moves into retail-facing roles like shop sales assistants
52         and commercial sales representatives",
53         "Consistent cross-brand progression within the same named
54         employer family"
55     ],
56     "caveats": [
57         "All prior roles are broadcasting and audiovisual technicians
58         , which is not listed as a typical role, so the pattern
59         is narrow",
60         "One jump to managing directors and chief executives in a
61         short time window may reflect noisy or coarse job
62         coding rather than a typical path"
63     ]
64 },
65 "P4": {
66     "final decision": "high",
67     "aspects": {
68         "Person-Job Fit": "The alignment between your background and
69             typical roles at Victorias Secret is very strong. You
70             already work as a retail merchandising manager, and the
71             company commonly hires for retail and wholesale trade
72             managers as well as sales and marketing managers, which
73             matches your experience. Your skills in merchandising,
74             customer service, sales, leadership, and time
75             management map directly onto the core competencies
76             needed for store and retail management roles, making
77             your culinary education largely irrelevant to this next
78             step.",
79         "Person-Organization Fit": "You and Victorias Secret are
80             clearly aligned in operating in the same retail domain,
81             with your current experience grounded in retail
82             operations and merchandising. You have direct
83             experience within the same broader brand family through
84             Victorias Secret Pink, which suggests cultural and
85             operational continuity if you move to the main
86             Victorias Secret brand. This kind of internal or
87             closely related brand transition is common in the data,
88             indicating that your background matches how the
89             organization typically sources talent.",
90     }
91 }

```

```

48     "Career Growth Opportunity": "Joining Victorias Secret now
49     appears to offer strong career growth potential because
50     it leverages your existing retail merchandising and
51     sales management experience while placing you in a
52     larger, core brand environment. Patterns from similar
53     people show multiple internal moves from Pink to
54     Victorias Secret into varied roles like sales,
55     commercial representation, and even interior design,
56     suggesting room for lateral and upward development.
57     Building on your already relevant experience within the
58     same brand family should position you well to expand
59     responsibility and deepen your expertise in retail and
60     brand management, even though your precise long-term
61     goals are not specified."
62 },
63 "summary": "Overall, Victorias Secret looks like a highly
64     suitable next step for you. Your current role as a retail
65     merchandising manager and your skills in sales, customer
66     service, and leadership line up closely with the
67     companys typical retail and sales/marketing positions.
68     You also bring directly relevant experience from
69     Victorias Secret Pink, which indicates strong
70     organizational continuity and reduces the risk of
71     cultural misfit. The move aligns well with your early-
72     career stage, representing a logical progression within
73     the same industry and brand family rather than an abrupt
74     shift. Data on similar people show that transitioning
75     from Pink into a range of roles at Victorias Secret is
76     common, reinforcing the realism of this path. While your
77     long-term career objectives are not fully specified, the
78     evidence suggests that Victorias Secret would both fit
79     your current profile and provide meaningful room for
80     growth, so it is recommended."
81 }
82 }

```

Case E3: Early-Career (Negative -> Low)

```

1  {
2      "case": "case3_early_neg",
3      "stage": "short",
4      "user_id": 216979,
5      "company": "lindenwood university",
6      "label": "negative",
7      "P1": {
8          "decision": "low",
9          "explanation": "The fit appears low because the users
10             background is rooted in retail merchandising and
11             management, while the company operates in the higher
12             education sector. Lindenwood Universitys typical roles
13             emphasize teaching, coaching, academic administration,
14             and financial/clerical positions, which do not clearly
15             align with the users retail-focused skills. The users
16             skills in merchandising, retail sales, and inventory
17             management do not directly match common university role
18             requirements such as instruction, academic advising, or
19             administrative secretarial work. Although the user has
20             general skills like leadership, customer service, and
21             Microsoft Office, these are broad and not specifically
22             tied to higher education responsibilities. The users
23             culinary arts education also does not map cleanly onto
24             the listed typical roles at the university.",
25     "core evidence": [
26         "User industry: retail vs. company industry: higher education
27         ",
28         "Current role: retail merchandising manager",
29         "Company typical roles: teachers, coaches, administrative
30         secretaries, credit/loan officers",
31         "User skills centered on retail, merchandising, sales"
32     ],
33     "caveats": [
34         "General skills (leadership, customer service, Microsoft
35         Office) could be transferable to some administrative
36         roles, but this is not clearly supported by the given
37         data."
38     ]
39 }

```



```

20 "P2": {
21   "decision": "low",
22   "explanation": "The likelihood of a strong fit with Lindenwood
    University between 2016 and 2020 appears low given the
    users prior experience. The users background is entirely
    in retail at Victorias Secret Pink, focused on sales,
    marketing, and some broadcasting/audiovisual technician
    work. Lindenwood University operates in the higher
    education industry, where typical roles center on
    teaching, sports coaching, administrative/secretarial
    work, credit and loans, and labor roles none of which
    clearly align with the users prior positions. There is no
    explicit indication of education-sector experience or of
    duties similar to university teaching, coaching, or
    academic administration. While some generic skills from
    sales and marketing could be transferable, the career
    path as given does not provide concrete evidence for a
    plausible move into the kinds of roles commonly observed
    at Lindenwood University during 2016-2020.",
23   "core evidence": [
24     "Retail sales and marketing roles at Victoria's Secret Pink",
25     "Broadcasting and audiovisual technician experience in a
    retail context",
26     "Lindenwood University in higher education with academic and
    admin-focused typical roles",
27     "No explicit overlap with teaching, coaching, university
    admin, or finance roles"
28   ],
29   "caveats": [
30     "Transferable sales/marketing or audiovisual skills could, in
    principle, support a non-typical university role, but
    such roles are not reflected in the provided company
    profile."
31   ]
32 },
33 "P3": {
34   "decision": "low",
35   "explanation": "The career scenarios for people with
    backgrounds similar to the user are too few. This limited
    number of scenarios can mean two things. First, there
    may simply be insufficient connection between the people
    with backgrounds similar to the user and Lindenwood
    University, indicating that transitions into Lindenwood
    University are uncommon. Second, even when such
    connections do exist, they may not occur at a career
    stage comparable to the user's, suggesting that
    Lindenwood University is not typically pursued at the
    user's current level of experience.",
36   "core evidence": [
37     "Only 0 scenario paths were available, which is below the
    required threshold."
38   ],
39   "caveats": []
40 },
41 "P4": {
42   "final decision": "low",
43   "aspects": {
44     "Person-Job Fit": "The users background centers on retail
    merchandising, sales, and inventory management at
    Victorias Secret Pink, plus some broadcasting/
    audiovisual work, which differ substantially from the
    responsibilities typical at Lindenwood University.
    Lindenwoods common roles are in teaching, coaching,
    academic administration, and financial/clerical work,
    areas that usually require education-specific or office-
    based skill sets rather than retail-focused expertise.
    While broad abilities such as leadership, customer
    service, and Microsoft Office could transfer in theory,
    there is no clear evidence of roles at Lindenwood that
    directly value the users retail or culinary training,
    leading to a weak person-job match.",
45     "Person-Organization Fit": "The user has built their
    experience in the retail industry, whereas Lindenwood
    University operates in the higher education sector with
    an emphasis on academic and administrative functions.
    The day-to-day environment, mission, and stakeholder
    expectations in a university context differ markedly
    from those in a consumer retail setting, suggesting a
    cultural and operational disconnect. Customer service
    strengths might be useful in student- or public-facing
    administrative roles, but such positions are not
    clearly highlighted in the typical role profile for
    Lindenwood in the provided data, so organizational fit
    appears limited.",
46     "Career Growth Opportunity": "Because the users core
    competencies in merchandising, retail management, and
    sales are not well matched to Lindenwoods typical
    academic and administrative roles, a move there would
    not clearly build on their existing strengths. The
    absence of any scenario paths from comparable profiles
    into Lindenwood suggests that such transitions are rare
    , providing little evidence that this move commonly
    serves as a platform for advancement. Although changing
    industries can sometimes open new growth avenues, the
    data here does not show a clear route from the users
    background into progressively more senior or
    specialized roles at Lindenwood University."
47   },
48   "summary": "Overall, the available evidence indicates a low
    fit between the users retail-focused profile and
    Lindenwood Universitys higher-education roles. The users
    skills in merchandising, retail sales, and inventory
    management do not align well with teaching, coaching,
    academic administration, or financial/clerical duties
    that are common at Lindenwood. The broader organizational
    context of a university also differs substantially from
    a retail environment, which raises doubts about cultural
    and day-to-day work fit. At the users current stage,
    shifting into higher education would likely require
    starting in less-related roles and undertaking
    significant retraining or education. Furthermore, no
    observed career paths show people with similar
    backgrounds successfully moving into Lindenwood,
    weakening the case for long-term growth there. Taken
    together, these factors suggest that Lindenwood
    University is not recommended for the user at this time,
    and opportunities closer to retail, marketing, or related
    domains are likely to offer stronger alignment and
    growth potential."
49   }
50 }

```