

# Online Appendix

## Appendix A. LLM Prompts Used

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

You are a Person-Company fit evaluator for a company recommendation system.

<TASK>  
You will receive a profile of a query user and a profile of [COMPANY\_NAME].  
Your goal is to determine whether [COMPANY\_NAME] is suitable for the user to change jobs, based solely on the information provided in the user profile and profile of [COMPANY\_NAME].  
</TASK>

<DECISION RULES>  
- You MUST output one of exactly two decisions: "high" or "low".  
- Choose "high" when the profiles provide clear, positive support that the user would plausibly fit [COMPANY\_NAME].  
- Choose "low" when the profiles provide weak support, are ambiguous, or contain notable mismatches.  
</DECISION RULES>

<EXPLANATION SYTYLE>  
- Start with 1 clear sentence stating your judgment (why "high" or "low").  
- Support it with 3-5 concrete sentences grounded in the provided profile fields.  
</EXPLANATION SYTYLE>

<OUTPUT FORMAT>  
- Output must conform to the provided JSON schema.  
- "explanation": 4-6 sentences.  
- "core evidence": 2-4 short phrases.  
- Use "caveats" if there is an important limitation, otherwise use an empty list.  
</OUTPUT FORMAT>

### A.2 Profile-Based Module – User Payload

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

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

You are a Person-Company fit evaluator for a company recommendation system.

<TASK>  
You will receive:  
1) career path: a structured representation of the user's previous career (sequence of company, role, year),  
2) career stage: the total number of years the user has been working and the user's current career stage, and  
3) company profile: a profile of [COMPANY\_NAME], including its industry and the most observed roles.  
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].  
</TASK>

<DECISION RULES>  
- You MUST output exactly one of two decisions: "high" or "low".

- decision = "high":  
\* The career path of the user provides clear rationale that it is plausible for the user to move to [COMPANY\_NAME].  
\* Consider:  
(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].  
(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.  
- decision = "low":  
\* The career path of the user cannot provides clear rationale that it is plausible for the user to move to [COMPANY\_NAME].  
\* Consider:  
(1) The previous companies of the user are less relevant to [COMPANY\_NAME], and the accumulated work experience is far from supporting the career transition to [COMPANY\_NAME].  
(2) The user's current career stage is either too soon or too late to transition to [COMPANY\_NAME], so you can explain why this is not an appropriate moment for the transition.  
</DECISION RULES>

<EXPLANATION STYLE>  
- Start with 1 clear sentence stating your judgment (why "high" or "low").  
- Support it with 3-5 concrete sentences grounded in the provided information.  
</EXPLANATION STYLE>

<OUTPUT FORMAT>  
- Output must conform to the provided JSON schema.  
- "explanation": 4-6 sentences in English.  
- "core evidence": 2-4 short phrases.  
- Use "caveats" if there is an important limitation, otherwise use an empty list.  
</OUTPUT FORMAT>

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

```
{
  "task": "Career-path-based user-company fit analysis",
  "inputs": {
    "career path": "<CAREER_PATH_JSON>",
    "career summary": {
      "total career years": "<INT>",
      "career stage": "<early-career|mid-career|senior-career>"
    },
    "company profile": "<COMPANY_PROFILE_JSON>"
  },
  "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."
}
```

### A.5 Scenario-Based Module – System Prompt

You are a Person-Company fit evaluator for a company recommendation system.

<CONTEXT>  
[COMPANY\_NAME] was recommended for the query user.  
You are given career histories of people similar to the query user who ended up moving to [COMPANY\_NAME].  
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.

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.

</CONTEXT>

<TASK>  
Based on the provided similar-people career histories, decide whether the recommendation of [COMPANY\_NAME] for the query user is plausibly supported.

</TASK>

<INPUTS>  
You will receive:  
1) company profile: a profile of [COMPANY\_NAME], including its industry and the most observed roles.  
2) scenarios: a list of career histories from people similar to the query user that lead to ([COMPANY\_NAME]). Each history is a sequence of steps: [company name, position name, year]

</INPUTS>

<DECISION RULES>  
You MUST output exactly one of two decisions: "high" or "low".  
- "high": the career progression before reaching [COMPANY\_NAME] in the scenario provide coherent, reasonable support that moving to [COMPANY\_NAME] is plausible.  
- "low": the career progression before reaching [COMPANY\_NAME] in the scenario do not provide coherent, reasonable support (weak, or not plausible).

<DECISION RULES>

<EXPLANATION SYTYLE>  
- Start with 1 clear sentence stating your judgment (why "high" or "low").  
- Support it with 3-5 concrete sentences grounded in the provided profile fields.

</EXPLANATION SYTYLE>

<OUTPUT FORMAT>  
- Output must conform to the provided JSON schema.  
- "explanation": 4-6 sentences.  
- "core evidence": 2-4 short phrases.  
- Use "caveats" if there is an important limitation, otherwise use an empty list.

</OUTPUT FORMAT>

## A.6 Scenario-Based Module – User Payload

```
{
  "task": "In the situation where [COMPANY_NAME] has been recommended to the query user, 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.",
  "inputs": {
    "company profile": "<COMPANY_PROFILE_JSON>",
    "scenarios": "<SCENARIO_PATHS_JSON>"
  },
  "guidelines": "You are given career histories of people similar to the query user who ended up moving to [COMPANY_NAME].\nEvaluate whether the career progression before reaching [COMPANY_NAME] reasonably supports moving to [COMPANY_NAME].\n"
}
```

## A.7 Explanation Synthesis and Verification – System Prompt

You are a senior expert in career analysis and advice.

<TASK>  
In this step, you will be given THREE analyses of how well [COMPANY\_NAME] fits a user.  
These analyses are provided as the followings:  
- profile-based rationale: rationale based on user profile and profile of [COMPANY\_NAME]

- career-path-based rationale: rationale based on the user's career path and the profile of [COMPANY\_NAME]  
- similar people's pattern (rationale based on career histories of people who are similar to the user and moved to [COMPANY\_NAME])

Now your goal is to integrate only this provided rationale and produce:  
1) One overall judgment about whether the move to [COMPANY\_NAME] is plausible for the user.  
2) A structured, user-facing explanation organized into four aspects.

</TASK>

<EXPLANATION STYLE>  
You must organize the explanation across the following three career decision factors:  
1) Person-Job Fit  
- How relevant the user's backgrounds (skills, work experiences, interests, etc.) are to [COMPANY\_NAME].  
2) Person-Organization Fit  
- 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).  
3) Career Growth Opportunities  
- Whether joining [COMPANY\_NAME] at this point appears to support the user's long-term career growth and progression.

For each aspect:  
- Write 2-4 sentences.  
- Base your reasoning only on:  
- the given information and rationales  
- If evidence is insufficient for an aspect, briefly state that the evidence is limited and explain how that affects your judgment.

</EXPLANATION STYLE>

<DECISION RULES>  
- You MUST output exactly one of three final decisions: "high" or "moderate" or "low".  
- Default to "high" or "low".  
- Base the final decision on the content of the provided information.  
- \* If the explanations overall support recommending [COMPANY\_NAME] to the user, choose "high" as the final decision.  
- \* If the explanations overall support not recommending [COMPANY\_NAME] to the user, choose "low" as the final decision.  
- When "moderate" is allowed:  
- \* Use "moderate" 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" decision difficult.

</DECISION RULES>

<SUMMARY STYLE>  
- After the three career decision factors, produce a 3-6 sentence overall summary:  
- \* Integrate the three career decision factors into one coherent context.  
- \* Clearly state whether [COMPANY\_NAME] is or is not recommended and why.  
- \* Mention any major caveats or uncertainties that influenced your judgment.

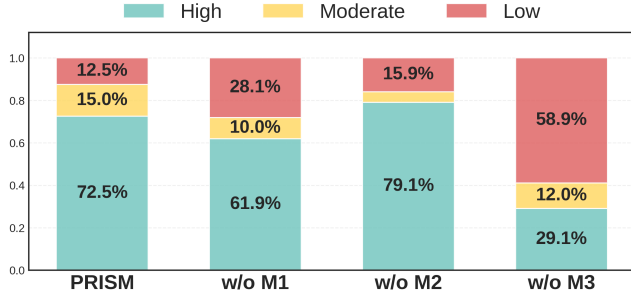
</SUMMARY STYLE>

<OUTPUT FORMAT>  
- Keep each explanation for career decision factors to 2-4 sentences.  
  
- Keep the summary to 3-6 sentences.

</OUTPUT FORMAT>

## A.8 Explanation Synthesis and Verification – User Payload

```
{
  "task": "Integrate multiple rationales and produce a final explanation for [COMPANY_NAME]",
  "inputs": {
```



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

```

"profile-based rationale": "<M1_RESULT_JSON>",
"career-path-based rationale": "<M2_RESULT_JSON>",
"similar people's pattern": "<M3_RESULT_JSON>"
},
"guidelines": "Use only the provided rationales to decide whether [
COMPANY_NAME] is suitable for the user.\nSynthesize the evidence
across career decision factors."
}

```

## Appendix B. Scenario Search and Scoring

**Scenario definition.** A candidate scenario is

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

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  $\pi$ .
- (2) **Temporal monotonicity:**  $t_{i+1} \geq t_i + \Delta_s$ ,  $\forall i$ , where  $\Delta_s$  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  $\epsilon$  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 1: Support and Rejection

PRISM reinforces correct recommendations and provides a basis for rejecting less suitable alternatives.

```

{
  "company": "johnson & johnson",
  "label": "positive",
  "M1: Profile-Based Reasoning": {
    "sub-decision": "high",
    "rationale": "This user appears to be a strong fit for Johnson & Johnson given the close alignment in industry and domain expertise. The user's background in GMP, FDA regulations, quality assurance, validation, and the pharmaceutical industry maps well to a large healthcare company operating in tightly regulated environments like Johnson & Johnson. Their experience spans both hospital & health care and consumer goods, which are directly relevant to J&J's healthcare and consumer product lines. The combination of an MBA in marketing/healthcare and a BA in molecular biology/biochemistry fits Johnson & Johnson's needs for marketing professionals and R&D-adjacent roles. Overall, both the technical pharma/biotech background and the business/marketing education support a plausible fit with the company's typical roles and industry focus.",
    "core evidence": [
      "Industry match: hospital & health care for both user and company",
      "Skills in GMP, FDA, QA, validation, pharma align with regulated healthcare products",
      "MBA in marketing/healthcare suits advertising and marketing roles",
      "Scientific undergraduate degree fits R&D-oriented healthcare company"
    ],
    "caveats": [
      "Typical roles listed focus more on sales/marketing/accounting than on quality/compliance, so exact role alignment is inferred rather than explicit"
    ]
  },
  "M2: Career-Path-Based Reasoning": {
    "sub-decision": "high",
    "rationale": "Johnson & Johnson appears to be a strong fit because the user has built their entire career within large healthcare and consumer health companies, which aligns with J&J's hospital & health care industry. Their experience at Merck places them in a major pharmaceutical environment, which is closely related to J&J's business. From 2012-2015 they worked as a policy and planning manager at McNeil Consumer Healthcare, a role that is managerial and strategic within the same broader healthcare/consumer health domain where J&J operates. By 2015 they have around nine years of experience and are at a mid-career stage, making a move into a large, diversified healthcare company like J&J between 2016 and 2020 both timely and realistic. Even if their exact title is not listed among J&J's most typical roles, their managerial and planning background in the same industry provides a credible pathway into corporate, strategic, or related functions at J&J.",
  }
}

```

```

"core evidence": [
  "Healthcare/pharma employers: Merck and McNeil Consumer Healthcare",
  "Managerial role: policy and planning managers (2012-2015)",
  "Mid-career stage with ~9 years experience by 2015",
  "Industry match with Johnson & Johnson's hospital & health care focus"
],
"caveats": []
},
"M3: Scenario-Based Reasoning": {
  "sub-decision": "high",
  "rationale": "Across the scenarios, individuals consistently move among large pharmaceutical and health-care companies (Merck, Pfizer, GSK, Novo Nordisk) before joining Johnson & Johnson, which operates in the same broad industry. This repeated cross-company movement within the health and life-sciences ecosystem supports the plausibility of transitioning into Johnson & Johnson for someone with a similar background. Several final roles at Johnson & Johnson (e.g., retail and wholesale trade managers, shop sales assistants) align with its typical commercial and retail-facing positions. While some job titles (like mining supervisors or artistic and cultural professionals) are atypical, they still occur within major health-related corporations, indicating flexible role mobility inside the sector. Overall, the strong industry continuity and observed transitions into Johnson & Johnson suggest the recommendation is plausibly supported.",
  "core evidence": [
    "All paths involve major pharma/health-care firms (Merck, Pfizer, GSK, Novo Nordisk) before Johnson & Johnson",
    "Multiple observed transitions from Merck and other pharma companies into Johnson & Johnson",
    "Some Johnson & Johnson end roles match listed typical roles (retail and wholesale trade managers, sales-related)",
    "Career moves show cross-functional mobility within the same health-care/pharma industry"
  ],
  "caveats": [
    "Several Johnson & Johnson roles (e.g., mining supervisors, social work and counselling professionals) do not clearly match the listed typical roles",
    "Shifts from artistic/cultural positions into scientific or managerial roles may be less typical and could indicate noisy or non-standard career paths"
  ]
},
"Explanation": {
  "aggregated decision": "high",
  "Career Decision Factors": {
    "Person-Job Fit": "The user's technical background in GMP, FDA regulations, quality assurance, validation, and pharmaceuticals aligns closely with Johnson & Johnson's work in tightly regulated healthcare and consumer health products. Their MBA in marketing/healthcare plus a BA in molecular biology/biochemistry fit well with J&J's needs for commercially oriented and R&D-adjacent roles. This combination makes them a plausible candidate for roles that bridge scientific understanding with marketing, policy, or strategic functions. The main caveat is that J&J's most commonly listed roles skew toward sales/marketing/accounting, so a pure quality/compliance role is inferred rather than explicitly evidenced.",
    "Person-Organization Fit": "The user has spent their career in hospital & health care and consumer health environments, which matches Johnson & Johnson's core industry focus. Experience at major players like Merck and McNeil Consumer Healthcare indicates familiarity with large, complex, regulated organizations similar to J&J. Their blend of healthcare and consumer goods exposure mirrors J&J's own structure, which spans medical, pharmaceutical, and consumer product lines. This suggests not only industry alignment but also strong suitability for the culture and operating environment of a global healthcare leader.",
  }
}

```

```

"Career Growth Opportunity": "Johnson & Johnson's scale and breadth across pharmaceuticals, medical devices, and consumer health offer substantial room for advancement for someone with both technical and business training. The user's 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."
},
"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 user's 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."
}
}

```

```

{
  "company": "lafargeholcim",
  "label": "semi-positive",
  "M1: Profile-Based Reasoning": {
    "sub-decision": "low",
    "rationale": "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.",
    "core evidence": [
      "User experience in hospital & health care and consumer goods, not building materials",
      "Skills centered on GMP, FDA, pharmaceutical quality and validation",
      "Company industry: building materials (cement/construction materials)",
      "Typical roles focus on industrial manufacturing and engineering"
    ],
    "caveats": []
  },
  "M2: Career-Path-Based Reasoning": {
    "sub-decision": "low",
  }
}

```

```

"rationale": "The fit with LafargeHolcim appears low because the
user's experience is concentrated in pharmaceuticals and consumer
healthcare, while LafargeHolcim operates in the building
materials industry. From 2007-2012, the user worked in an
artistic/cultural associate professional role at Merck, which is
far from LafargeHolcim's core manufacturing, engineering, and
business operations focus. From 2012-2015, 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. LafargeHolcim's 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 LafargeHolcim's most common roles,
despite some generic management skills that might transfer. Given
industry misalignment and limited role similarity, a move to
LafargeHolcim between 2016-2020 is not strongly supported by the
observed career path alone.",
"core evidence": [
  "Career concentrated in pharmaceuticals and consumer healthcare
  ",
  "Early career as artistic/cultural associate professional at
  Merck",
  "Later role as policy and planning manager at McNeil Consumer
  Healthcare",
  "LafargeHolcim focused on building materials with manufacturing
  /engineering-heavy roles"
],
"caveats": [
  "General management and planning skills could be transferable
  to certain corporate roles at LafargeHolcim, but this is not
  clearly evidenced in the data."
]
},
"M3: Scenario-Based Reasoning": {
  "sub-decision": "low",
  "rationale": "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.",
  "core evidence": [
    "Only 0 scenario paths were available, which is below the
    required threshold."
  ],
  "caveats": []
},
"Explanation": {
  "aggregated decision": "low",
  "Career Decision Factors": {
    "Person-Job Fit": "The user's core skills lie in pharmaceutical
    and healthcare quality, GMP, FDA regulations, validation, and
    life-science compliance, while LafargeHolcim's typical roles
    are in industrial manufacturing and engineering for building
    materials. This means the most specialized and valuable parts
    of the user's expertise would not directly map to the company's
    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 person-job fit appears weak and
    would likely require a major functional and industry pivot.",
    "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 LafargeHolcim's typical
    organizational context and industry focus appears low.",

```

```

"Career Growth Opportunity": "Because the user's domain
expertise is tightly linked to pharmaceuticals and healthcare,
joining LafargeHolcim would not strongly leverage their
accumulated regulatory and quality experience. Growth within
LafargeHolcim's 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
user's starting point. Overall, the company does not appear to
be a strong platform for maximizing the user's long-term growth
given their current specialization."
},
"summary": "Across all dimensions, LafargeHolcim appears to be a
weak fit for the user. The user's 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 person-job
and person-organization fit. The proposed move would represent a
substantial industry and functional pivot that does not clearly
build on the user's established career trajectory. Evidence from
similar profiles shows virtually no common pathways from
comparable backgrounds into LafargeHolcim, especially at the user
's 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."
}
}

```

## Case 2: Potential for Enhanced Decision-making

This case involves a *low* verdict on positive pairs. PRISM has the potential to act as an active career advisor rather than a passive predictor.

```

{
  "company": "independent consultant",
  "label": "positive",
  "M1: Profile-Based Reasoning": {
    "sub-decision": "low",
    "rationale": "The fit appears low because the user's background
    is centered on human resources, EEO/AA compliance, and diversity
    management, while the company is positioned in information
    technology and services. The user's 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 company's primary needs overlap with the user'
    s HR and EEO/AA compliance specialization.",
    "core evidence": [
      "User specialization in HR, EEO/AA compliance, diversity and
      inclusion",
      "Company industry: information technology and services",
      "Company typical roles: systems analysts, marketing, business
      services, policy administration",
      "User industries: financial services, utilities, human
      resources"
    ],
    "caveats": [
      "Some overlap could exist with policy administration or legal-
      oriented consulting, but this is not explicit in the company
      profile."
    ]
  },
  "M2: Career-Path-Based Reasoning": {
    "sub-decision": "low",

```

```

"rationale": "The fit with an independent consultant role in
information technology and services appears low given the user's
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.",
"core evidence": [
  "Career entirely in environmental and occupational health at
  Sony Electronics",
  "Target industry: information technology and services",
  "Typical roles: systems analysts, business services, marketing,
  legal, policy administration",
  "No explicit IT, systems, or business services experience in
  the career path"
],
"caveats": [
  "Independent consulting can exist in environmental/health
  domains, but the given company profile is specifically IT and
  services oriented"
]
},
"M3: Scenario-Based Reasoning": {
  "sub-decision": "low",
  "rationale": "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.",
  "core evidence": [
    "Only 4 scenario paths were available, which is below the
    required threshold."
  ],
  "caveats": []
},
"Explanation": {
  "aggregated decision": "low",
  "Career Decision Factors": {
    "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 profile (systems analysts,
    business services agents, marketing and legal-policy
    professionals) rely 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.",

```

```

"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 firm
's culture and commercial focus. At best, your compliance
perspective might add niche value, but the overarching
organizational fit appears weak in the available data.",
"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 one's expertise, the evidence here does not
support that alignment in your case."
},
"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."
}
}

```

### Case 3: Robustness for Early-career Users

Despite the short career history of the user, PRISM accurately assigned *high* verdict to the positive pair and *low* verdict to the negative pair.

```

{
  "company": "victoria's secret",
  "label": "positive",
  "M1: Profile-Based Reasoning": {
    "sub-decision": "high",
    "rationale": "This company is a strong match because both the
    user and the company are clearly aligned in the retail industry
    and role types. The user's experience as a retail merchandising
    manager directly fits with Victoria's Secret's 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 user's 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.",
    "core evidence": [
      "shared retail industry",
      "current role: retail merchandising manager",
      "skills in merchandising, sales, customer service, leadership",
      "company offers retail management and sales/marketing roles"
    ],

```

```

    "caveats": [],
  },
  "M2: Career-Path-Based Reasoning": {
    "sub-decision": "high",
    "rationale": "The fit is high because the user already has
directly relevant experience at Victoria's Secret Pink in roles
aligned with Victoria's Secret's core functions. The user has
worked in sales and marketing manager positions, which directly
match one of Victoria's Secret's typical roles. Their experience
is in the same broader retail brand family and industry, so
moving between 2016 and 2020 to Victoria's 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 Victoria's Secret brand
during 2016-2020 is well-timed and realistic. The combination of
relevant functional experience and brand continuity strongly
supports the plausibility of this move.",
    "core evidence": [
      "Experience at Victoria's Secret Pink (same brand family)",
      "Sales and marketing manager roles matching typical roles",
      "Retail-related experience aligned with Victoria's Secret's
industry",
      "Early-career stage with 3 years' experience by 2015"
    ],
    "caveats": [],
  },
  "M3: Scenarion-Based Reasoning": {
    "sub-decision": "high",
    "rationale": "Across all scenarios, people move from roles at "
victoria's secret pink" into various positions at "victoria's
secret" indicating a common internal or closely related brand
transition. Even though the initial role is in broadcasting and
audiovisual work, the subsequent positions at Victoria's Secret (
such as interior designers and decorators, shop sales assistants,
and commercial sales representatives) align well with typical
retail, design, and sales functions for the company. The presence
of interior design roles specifically matches one of the company
's listed typical roles. This repeated pattern suggests that for
someone with a similar background, moving into Victoria's Secret
is a realistic and supported career step.",
    "core evidence": [
      "All examples start at victoria's secret pink then move to
victoria's secret",
      "Transitions into interior designers and decorators, a listed
typical role",
      "Moves into retail-facing roles like shop sales assistants and
commercial sales representatives",
      "Consistent cross-brand progression within the same named
employer family"
    ],
    "caveats": [
      "All prior roles are broadcasting and audiovisual technicians,
which is not listed as a typical role, so the pattern is narrow
",
      "One jump to managing directors and chief executives in a short
time window may reflect noisy or coarse job coding rather than
a typical path"
    ]
  },
  "Explanation": {
    "aggregated decision": "high",
    "Career Decision Factors": {
      "Person-Job Fit": "The alignment between your background and
typical roles at Victoria's Secret is very strong. You already
work as a retail merchandising manager, and the company
commonly hires for retail and wholesale trade managers as well
as sales and marketing managers, which matches your experience.
Your skills in merchandising, customer service, sales,
leadership, and time management map directly onto the core
competencies needed for store and retail management roles,
making your culinary education largely irrelevant to this next
step.",

```

```

"Person-Organization Fit": "You and Victoria's Secret are
clearly aligned in operating in the same retail domain, with
your current experience grounded in retail operations and
merchandising. You have direct experience within the same
broader brand family through Victoria's Secret Pink, which
suggests cultural and operational continuity if you move to the
main Victoria's Secret brand. This kind of internal or closely
related brand transition is common in the data, indicating
that your background matches how the organization typically
sources talent.",
"Career Growth Opportunity": "Joining Victoria's Secret now
appears to offer strong career growth potential because it
leverages your existing retail merchandising and sales
management experience while placing you in a larger, core brand
environment. Patterns from similar people show multiple
internal moves from Pink to Victoria's Secret into varied roles
like sales, commercial representation, and even interior
design, suggesting room for lateral and upward development.
Building on your already relevant experience within the same
brand family should position you well to expand responsibility
and deepen your expertise in retail and brand management, even
though your precise long-term goals are not specified."
  },
  "summary": "Overall, Victoria's Secret looks like a highly
suitable next step for you. Your current role as a retail
merchandising manager and your skills in sales, customer service,
and leadership line up closely with the company's typical retail
and sales/marketing positions. You also bring directly relevant
experience from Victoria's Secret Pink, which indicates strong
organizational continuity and reduces the risk of cultural misfit
. The move aligns well with your early-career stage, representing
a logical progression within the same industry and brand family
rather than an abrupt shift. Data on similar people show that
transitioning from Pink into a range of roles at Victoria's
Secret is common, reinforcing the realism of this path. While
your long-term career objectives are not fully specified, the
evidence suggests that Victoria's Secret would both fit your
current profile and provide meaningful room for growth, so it is
recommended."
}
}

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{
  "company": "lindenwood university",
  "label": "negative",
  "M1: Profile-Based Reasoning": {
    "sub-decision": "low",
    "rationale": "The fit appears low because the user's background
is rooted in retail merchandising and management, while the
company operates in the higher education sector. Lindenwood
University's typical roles emphasize teaching, coaching, academic
administration, and financial/clerical positions, which do not
clearly align with the user's retail-focused skills. The user's
skills in merchandising, retail sales, and inventory management
do not directly match common university role requirements such as
instruction, academic advising, or administrative secretarial
work. Although the user has general skills like leadership,
customer service, and Microsoft Office, these are broad and not
specifically tied to higher education responsibilities. The user'
s culinary arts education also does not map cleanly onto the
listed typical roles at the university.",
    "core evidence": [
      "User industry: retail vs. company industry: higher education",
      "Current role: retail merchandising manager",
      "Company typical roles: teachers, coaches, administrative
secretaries, credit/loan officers",
      "User skills centered on retail, merchandising, sales"
    ],
    "caveats": [
      "General skills (leadership, customer service, Microsoft Office
) could be transferable to some administrative roles, but this
is not clearly supported by the given data."
    ]
  },
  "M2: Career-Path-Based Reasoning": {
    "sub-decision": "low",

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"rationale": "The likelihood of a strong fit with Lindenwood University between 2016 and 2020 appears low given the user's prior experience. The user's background is entirely in retail at Victoria's 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 user's 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.",
"core evidence": [
  "Retail sales and marketing roles at Victoria's Secret Pink",
  "Broadcasting and audiovisual technician experience in a retail context",
  "Lindenwood University in higher education with academic and admin-focused typical roles",
  "No explicit overlap with teaching, coaching, university admin, or finance roles"
],
"caveats": [
  "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."
]
},
"M3: Scenario-Based Reasoning": {
  "sub-decision": "low",
  "rationale": "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.",
  "core evidence": [
    "Only 0 scenario paths were available, which is below the required threshold."
  ],
  "caveats": []
},
"Explanation": {
  "aggregated decision": "low",
  "Career Decision Factors": {
    "Person-Job Fit": "The user's background centers on retail merchandising, sales, and inventory management at Victoria's Secret Pink, plus some broadcasting/audiovisual work, which differ substantially from the responsibilities typical at Lindenwood University. Lindenwood's 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 user's retail or culinary training, leading to a weak person-job match.",
    "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.",

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"Career Growth Opportunity": "Because the user's core competencies in merchandising, retail management, and sales are not well matched to Lindenwood's 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 user's background into progressively more senior or specialized roles at Lindenwood University."
},
"summary": "Overall, the available evidence indicates a low fit between the user's retail-focused profile and Lindenwood University's higher-education roles. The user's 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 user's 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."
}
}

```