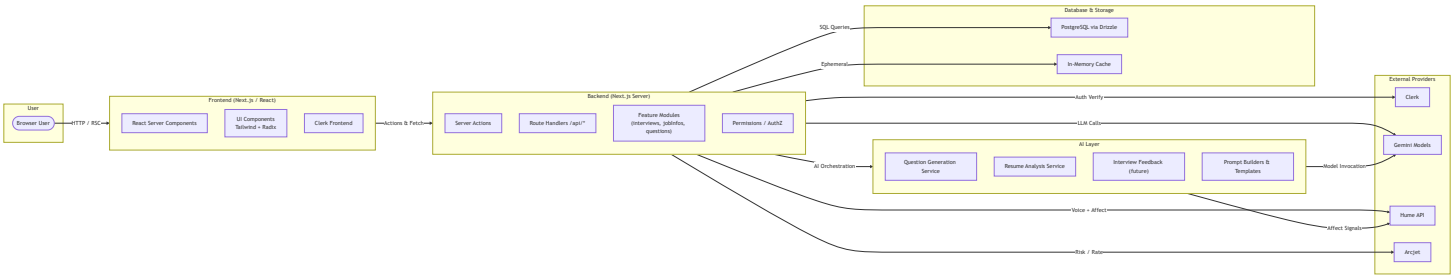


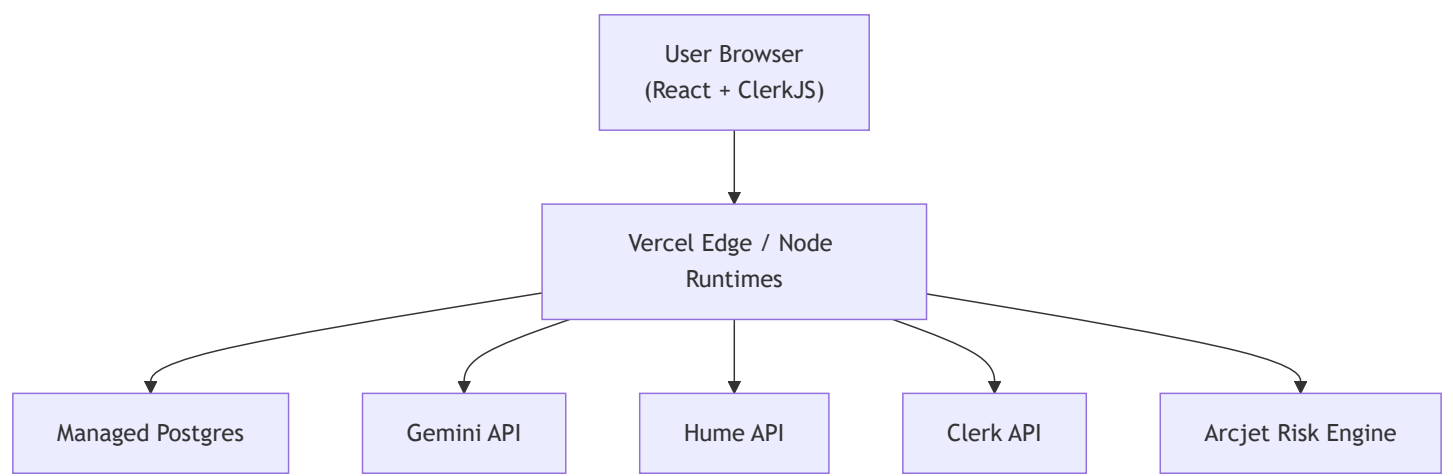
# System Architecture Diagrams

This document presents visual architecture representations of the AI Powered Job Prep platform using **Mermaid** (GitHub native rendering). It mirrors the boxed style of the provided reference image (User → Frontend → Backend → Data/Storage → AI Layer + External Services) while remaining text-based and versionable.

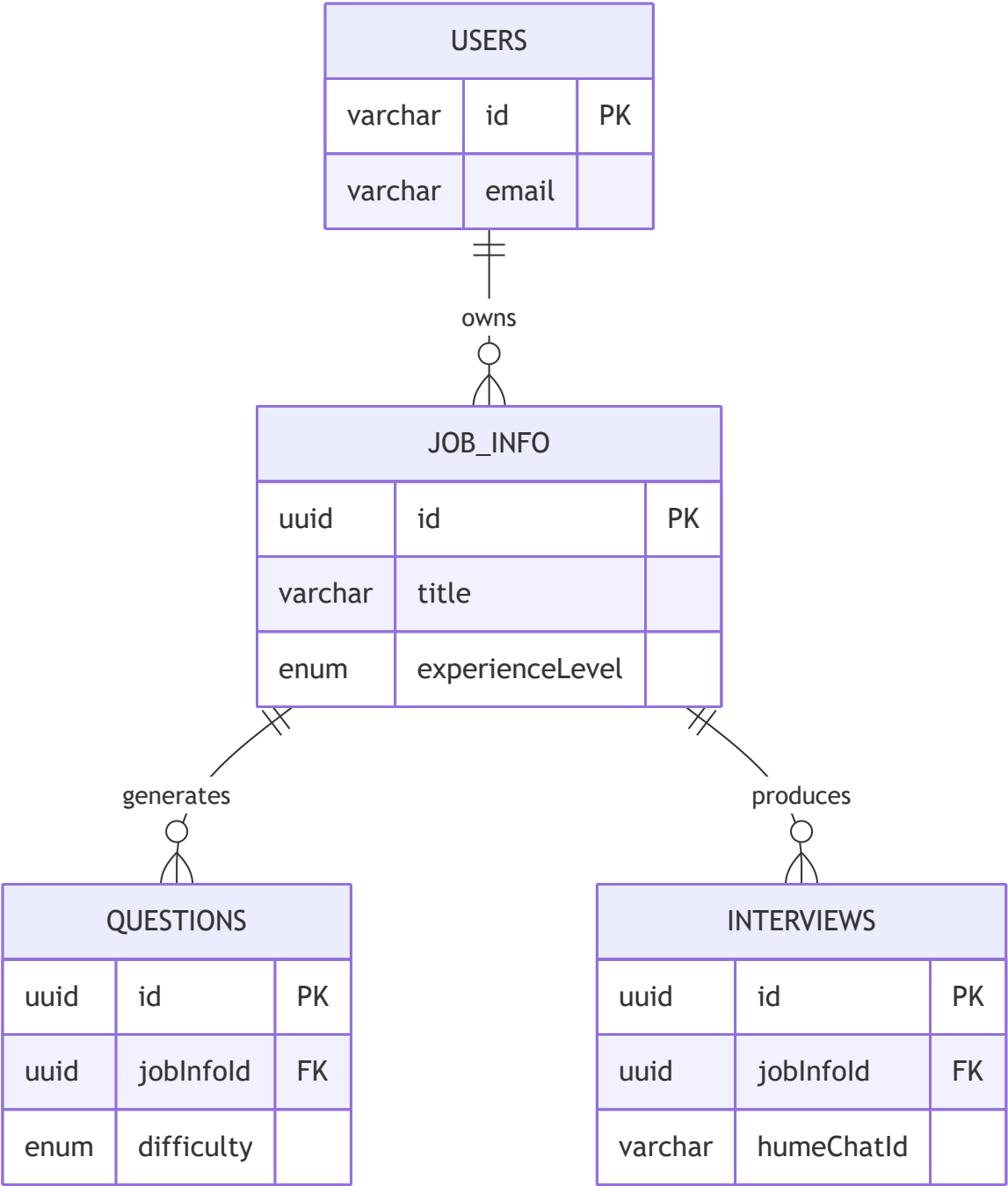
## 1. High-Level System Landscape



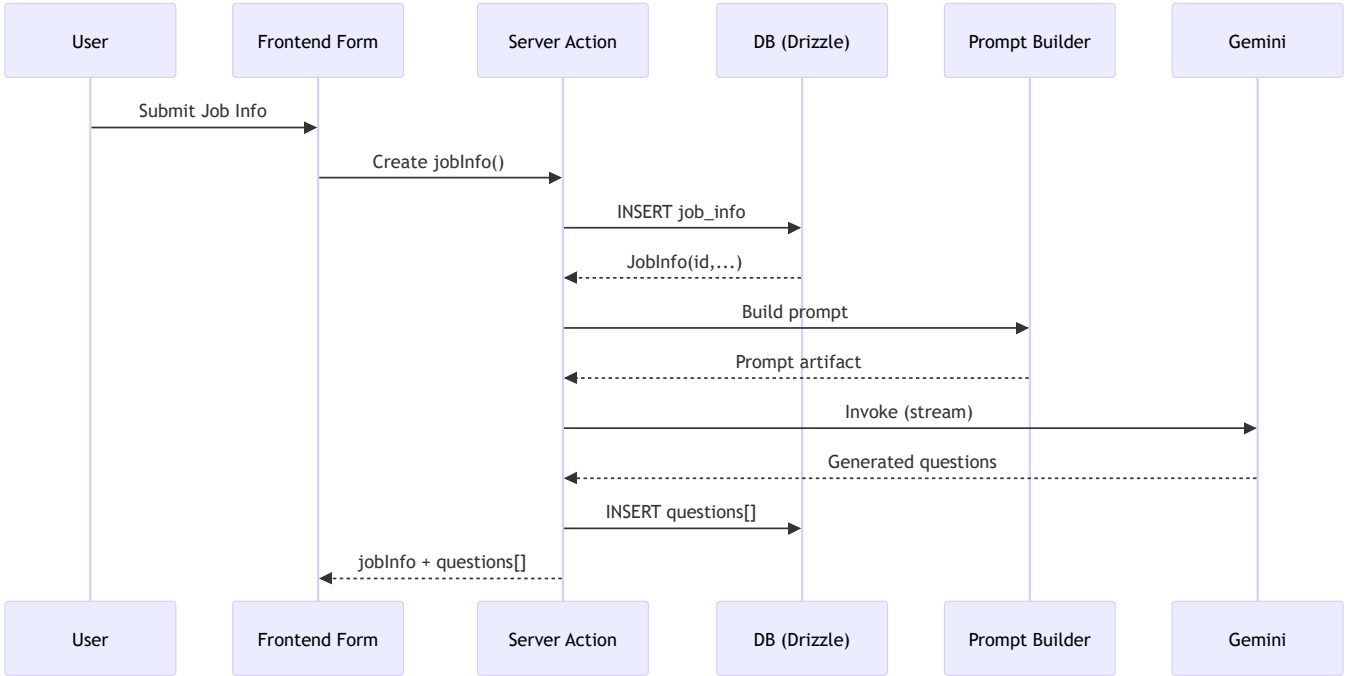
## 2. Deployment / Runtime Topology



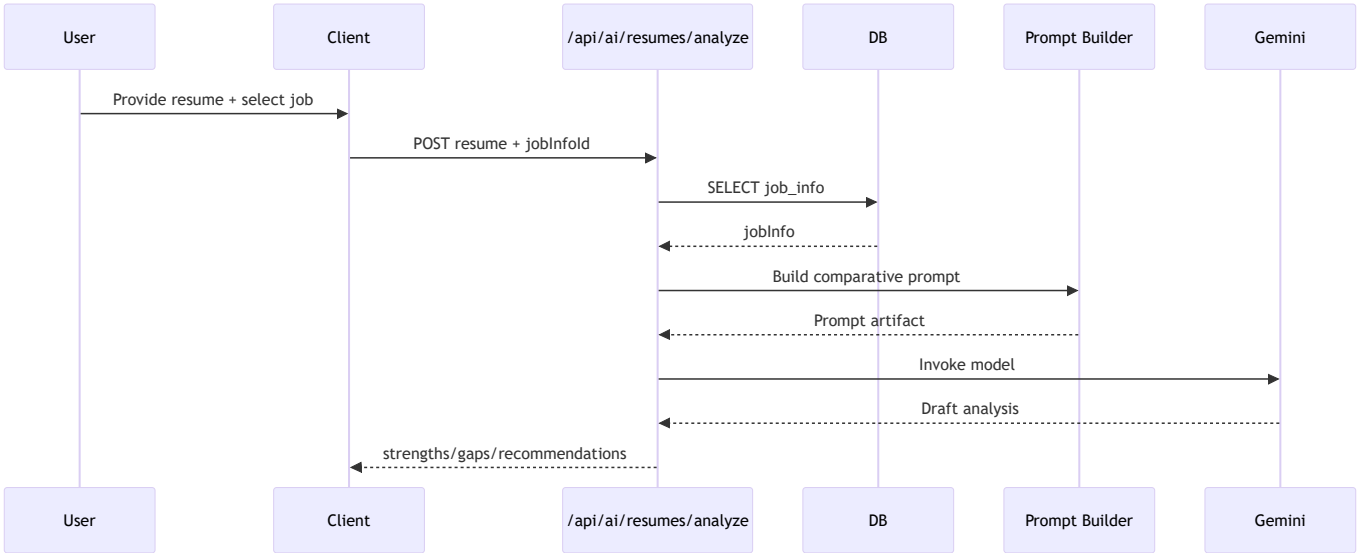
### 3. Data Model (Current Core)



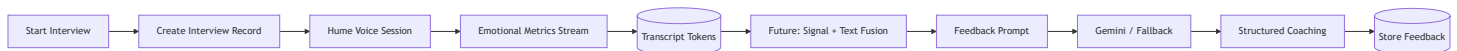
# 4. AI Question Generation Flow



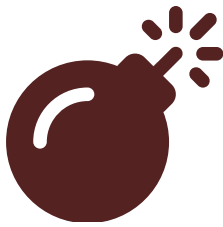
# 5. Resume Analysis Flow



## 6. Interview Session & Affective Feedback (Planned Extension)

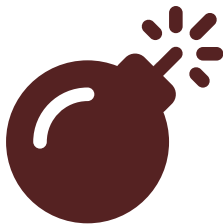


## 7. AI Processing Pipeline (Standard Pattern)



Syntax error in text  
mermaid version 11.9.0

## 8. Planned Observability (Conceptual)



Syntax error in text  
mermaid version 11.9.0

## 9. Legend / Conventions

- Rectangles: Logical components
- Rounded: External actors or ephemeral processes
- Cylinders: Persistent storage
- Dashed arrows: Planned / future pathways
- "Fallback" edges indicate resilience strategies

## 10. Exporting Diagrams as Images

If you need static images:

1. Use VS Code Mermaid preview extension or mermaid.live
2. Paste code → Export PNG/SVG
3. Store under `public/diagrams/` if you want to embed in docs or marketing pages.

Optional CLI (Node):

```
npm install -D @mermaid-js/mermaid-cli
mmdc -i docs/DIAGRAMS.md -o public/diagrams/architecture.png
```

(For large mixed files, copy individual code blocks into temporary `.mmd` files.)

## 11. Future Additions

- Add `ai_audit_log` & `resume_analysis` ER extensions
- Add sequence for multi-model fallback
- Add cost governance diagram (budgets → enforcement → analytics)

## 12. Change Log

- 2025-09-16: Initial diagram compendium added.
- ``