

Below is an **enhanced PRD** section (focused on the CLI workflow) reflecting your latest requirements. It outlines how a **single command** (`cli.py`) can gather all necessary data, run all six computations, and then generate comprehensive AI-driven analyses per method—storing or reusing user data as needed.

# Enhanced CLI & Workflow Requirements

## 1. Single CLI Entry-Point

- File: `cli.py`
- Command: `python cli.py run`
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This single command will:

1. **Collect all necessary inputs** (date of birth, birthplace, gender, etc.) via an interactive question-and-answer flow.
2. **Run all six methods** (Bazi, Feng Shui, Western Astrology, Chinese Zodiac, I Ching, Vedic Astrology).
3. **Display results** for each method in a structured, tabulated format.
4. **Invoke AI agents** (one per method) to provide detailed multi-paragraph analyses.

## 2. Data Collection & “Question Table”

### 1. Centralized Prompts:

- Instead of separate prompts for each method, create a single “question table” or structured dictionary of all required fields: `ALL_QUESTIONS = [`
- `{"field": "dob", "prompt": "Enter your date of birth (YYYY-MM-DD):", "validation": "..."},`
- `{"field": "birth_time", "prompt": "Enter your time of birth (HH:MM, UTC±X):", "validation": "..."},`
- `{"field": "gender", "prompt": "Enter your gender (M/F/Other):", "validation": "..."},`
- `{"field": "birth_place", "prompt": "Enter your birthplace (country, state, city):", "validation": "..."},`
- `# additional fields as needed for each method`
- `]`
- 

### 2. Data Storage & Reuse:

- After collecting input, store it in **SQLite** or **JSON** so users can reuse or modify data later without re-entering everything.
- Example table (`user_data`): `CREATE TABLE user_data (`
- `user_id INTEGER PRIMARY KEY,`
- `dob TEXT,`
- `birth_time TEXT,`
- `gender TEXT,`
- `birth_place TEXT,`

- ...
- );
- 
- If the user has previously run the program, we can **offer to reuse** saved data instead of prompting them again.

### 3. All-Methods Execution Flow

When the user runs `python cli.py run`:

#### 1. Check Existing User Data:

- If user data is found in the local database, ask if they want to reuse it.
- Otherwise, prompt for all required fields and store them.

#### 2. Compute Each Method:

- **Bazi:**
  - Convert `dob + birth_time` → compute Heavenly Stems, Earthly Branches.
- **Feng Shui:**
- Use user's home data (if relevant) or fallback to partial data.
- **Western Astrology:**
- Convert date/time + birth\_place → planetary positions, aspects.
- **Chinese Zodiac:**
- Use `dob year` → zodiac animal.
- **I Ching:**
- If a user's question is needed, prompt: "Enter a question for the I Ching."
- **Vedic Astrology:**
- Convert birth time/place → Nakshatra, Dasha system.

#### 3. Tabulate Results:

- After computations are done, display a summary table in the terminal using **Rich**:
- `from rich.table import Table`
- `table = Table(title="Life Path Prediction Results")`
- `table.add_column("Method", justify="left", style="cyan")`
- `table.add_column("Key Findings", justify="left", style="magenta")`
- 
- `table.add_row("Bazi", str(bazi_result))`
- `table.add_row("Feng Shui", str(fengshui_result))`
- ...
- `console.print(table)`
- 

#### 4. AI Agent Analyses:

- For each method, call the local LLM (Ollama) with an appropriate role prompt, e.g.:
- `def get_ai_analysis(method_name, method_result):`
- `prompt = f"Act like Master {method_name}`
- `practitioner. " \`

- `f"Here is the user's computed result:  
{method_result}. " \`
- `f"Provide a multi-paragraph analysis  
covering life, career, investment, health,  
relationships, worldview, focus, and execution."`
- `return OllamaAgent().generate_response(prompt)`
- 
- Print each analysis below the table or in a separate section:  
`console.print("[bold green]AI Analysis - Bazi[/bold  
green]")`
- `console.print(bazi_analysis)`
- `console.print("[bold green]AI Analysis - Feng Shui[/  
bold green]")`
- `console.print(fengshui_analysis)`
- `...`
- 

## 4. Example CLI Flow

### Sample Terminal Session

1. User runs: `python cli.py run`
- 2.
3. **System checks** if user data is in the DB:
  - If yes: Found existing user profile. Reuse? (Y/N):
  - 
  - If no or user chooses no, prompts: Enter your date of birth  
(YYYY-MM-DD): 1990-05-15
  - Enter your time of birth (HH:MM UTC±X): 14:30 UTC+8
  - Enter your gender (M/F/Other): M
  - Enter your birthplace (country, state, city): USA,  
CA, San Francisco
  - `...`
  -
4. **System computes** all methods automatically:
  - Bazi -> Output stored in `bazi_result`
  - Feng Shui -> `fengshui_result`
  - Western Astrology -> `western_result`
  - Chinese Zodiac -> `chinese_zodiac_result`
  - I Ching -> `iching_result` (prompts for question if needed)
  - Vedic Astrology -> `vedic_result`

5. **System displays** a summary table in the terminal:

6.	Life Path Prediction Results

7.		
8.	Method	Key Findings
9.		
10.	Bazi Pillars: ...	Element: Water, Luck
11.	Feng Shui Star: 9, ...	House orientation: NW, Base
12.	Western Astrology	Sun in Taurus, Moon in Leo, ...
13.	Chinese Zodiac	Horse
14.	I Ching Apart, ...	Hexagram 23: Splitting
15.	Vedic Astrology Ketu ...	Nakshatra: Ashwini, Dasha:
16.		

- 17.
18. **System invokes** AI agents per method, then prints multi-paragraph analyses: AI Analysis - Bazi
19. "As a Master Bazi practitioner, I see that your strong Water element..."
20. (detailed multi-paragraph explanation)..."
- 21.
22. AI Analysis - Feng Shui
23. "Acting as a Master Feng Shui practitioner, I recommend..."
24. (detailed multi-paragraph explanation)..."
- 25.
26. ...
- 27.
28. **User sees** all methods' raw outputs **and** expert-level explanations in one terminal session.

## 5. Data Persistence & Reusability

- **User Table:**
  - `user_id` (PK), `dob`, `birth_time`, `gender`, `birth_place`, etc.
- **Session Table** (optional):
  - `session_id` (PK), `user_id` (FK), `timestamp`, `bazi_result`, `fengshui_result`, etc.
- **Reusability:**
  - Next time the user runs `python cli.py run`, they can choose to load an existing session or user data.

## 6. Implementation Tips

1. **Validation:** For each input, use either regex or custom logic (e.g., valid birth years = 1900–2025).
2. **Modular Code:**
  - `cli.py` orchestrates user input and triggers computations.
  - Each method's computation logic lives in its own module (`computations/bazi.py`, `computations/feng_shui.py`, etc.).
3. **Rich:**
  - Use `rich.prompt` for interactive prompts if you prefer theming, or keep to standard Python `input()` for simplicity.
4. **Error Handling:**
  - If data is incomplete (e.g., no floor plan for Feng Shui), skip or provide partial results with a warning.
5. **Agent Calls:**
  - The prompt structure for Ollama can be standardized in a utility function (e.g., `ollama_agent.generate(method_name, method_result)`).
6. **Testing:**
  - Create unit tests ensuring each method's output is correct for known inputs (e.g., a known Bazi chart for 1990-05-15 14:30 UTC+8).

## Updated Deliverables

1. **Single CLI Tool (`cli.py`):**
  - A single `run` command that:
    - Prompts for user data (or loads existing data).
    - Computes all six methods in sequence.
    - Displays tabulated results.
    - Fetches AI agent analyses per method and prints them.
2. **User Data Persistence:**
  - An SQLite database with tables for user profiles and (optionally) session results.
3. **Comprehensive Output:**
  - Each method's raw computed results + an AI-driven analysis.
4. **README Updates:**
  - Clear instructions on:
    - **Installing** dependencies.
    - **Running** `python cli.py run`.
    - **Sample inputs & expected sample outputs**.
    - **Data reuse** (how to load an existing user).
    - **Troubleshooting** (common errors, e.g., incomplete data, invalid birth time format).

## Conclusion

By consolidating all six methods under **one CLI run** flow, you achieve a **holistic** user experience. The user provides data once, the system executes every calculation, and the user sees both **numerical** (or textual) **results** and **expert-level analyses** in a single terminal session. This meets the requirement of a more **user-friendly, integrated** system with advanced AI insights.