***Decoding Psychedelic Experiences**: An Analysis of Trip Reports with LLMs*

Yang Ong

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Data and Research Questions

Data Source: Erowid's Experience Vault

- **Data type**: Large blocks of unstructured text
- 1096 Entries scraped using a program built with Python, Selenium, and Beautiful Soup
- 570 Entries after cleaning/pruning

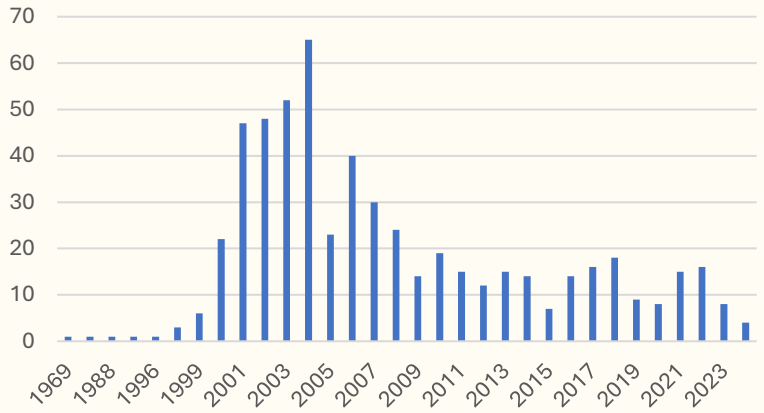
Primary Question: What qualitative factors are most correlated with positive trip outcomes?

Secondary Question: How do results differ between small and large parameter models when analyzing large amounts of unstructured text data?

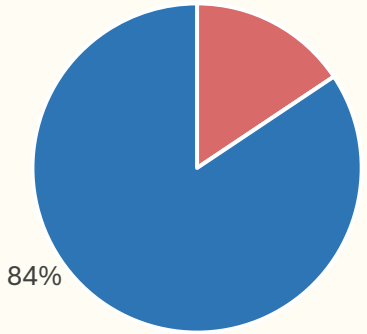
- **Small model:** DeepSeek R1-8b – Locally on RTX 2060 (8 billion parameters)
- **Large model**: GPT4.1 – via API (1.76 trillion parameters)

EDA / Methodology

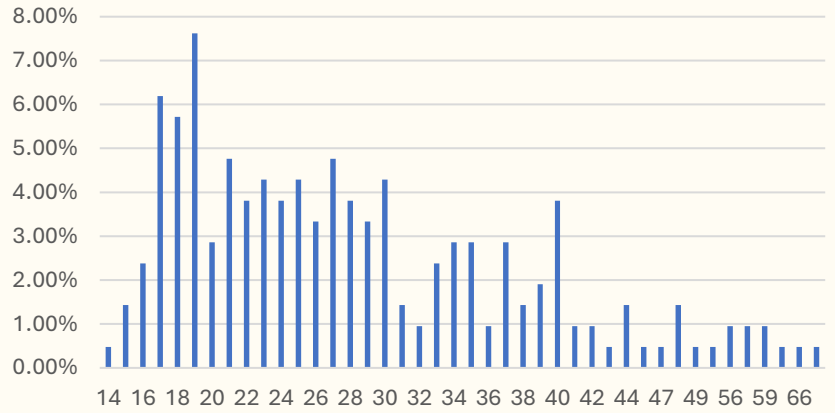
Report Publish Date Distribution



Gender Distribution



Age Distribution



Step 1: Summarize each report with a LLM, identifying 6 key categories (Ollama, LangChain, OpenAI APIs)

1. **Experience Level:** How experienced was the author with psychedelics?
2. **Control/Environmental Safety:** How much control or environmental safety did the author have during the experience?
3. **Mindset:** How much guiding mental, spiritual, or philosophical framework did the author have going into the experience?
4. **Intention:** How clear and meaningful was the author's purpose for taking the substance?
5. **Integration:** Did the author take steps to reflect on or apply the experience afterward?
6. **Outcome:** How positive or negative was the experience overall?

Step 2: Classify summarized reports with a LLM, rating each category between 1-5, Integration as a 1 or 0 for yes/no.

- 1 being low/poor to 5 being high/positive

Step 3: Identify patterns between the category and outcome scores

App Proposal – Unstructured Text Classifier

Analyze unstructured text at scale using LLMs

Flask web app with LLM backend offering two modes:

- Summarize – Extract key insights from unstructured text across user-defined categories
- Classify – Score text based on user-defined criteria

Initialization (User Setup):

- Upload CSV file
- Specify:
  - Column to analyze (dropdown)
  - Output filename
  - OpenAI API key, GPT model
- Define classification categories and assign rating scale
- Map each score to a ground truth label
- Enter custom prompt (or auto-generate using credits)

Run Options:

- Summarize: LLM summarizes each entry in the selected column
- Classify: LLM reads the summaries and assigns ratings across categories