

Proposed Bachelor Thesis Topics



Institute for AI in Marketing Analytics

1

Framing Effects on Brand Visibility

Research Question

- Does rhetorical framing ('What do experts recommend?' vs. 'What do most people buy?') alter LLM brand recommendations?
- Fixed product category, semantically equivalent prompts with varying perspective frames
- Isolates framing as an independent variable from content

Methods & Relevance

- Controlled prompt experiment · Cosine similarity / brand overlap metrics
- Statistical comparison across frames (e.g. R or Excel)
- Tests whether LLM visibility is manipulable through linguistic framing — no coding required

2

Negative Context & Brand Visibility

Research Question

- Does negative contextual information in a prompt ('I heard Brand X has quality issues') reduce that brand's LLM recommendation frequency?
- Key comparison: Google still ranks the brand's website at #1 — does the LLM behave differently?
- Tests whether LLMs are more sensitive to sentiment-laden input than traditional search engines

Methods & Relevance

- Controlled prompt experiment: neutral vs. negatively framed prompts across a fixed brand set
- Systematic comparison of brand mentions before/after negative framing · Statistical analysis
- Novel angle with direct practical relevance

Coding Python helpful (API automation) but not strictly required — manageable with manual prompting
+ Excel for smaller scale.

3

Prompt Specificity & Brand Visibility in LLMs

Research Question

- Does the specificity of a prompt systematically influence which brands LLMs recommend?
- Vague vs. detailed prompts compared across a fixed product category
- Measures: brand mention frequency, rank position, consistency across repetitions

Methods & Relevance

- Automated API prompting (Python) · NLP-based brand extraction
- Frequency & ranking analysis · Statistical comparison
- Directly addresses: what drives brand salience in LLM recommendations?

Coding Python required (API calls, NLP, data analysis). No prior experience needed — willingness to learn is sufficient.

4

Online Presence as a Predictor of LLM Visibility

Research Question

- Is there a measurable correlation between a brand's online presence and its LLM recommendation frequency?
- Online presence metrics (e.g. Wikipedia article length/quality, Reddit mentions, YouTube coverage) correlated with LLM mention frequency
- Hypothesis: LLMs trained on web data favour brands with stronger online footprint

Methods & Relevance

- Web scraping (Wikipedia API, Reddit, YouTube) · Automated LLM prompting
- Correlation & regression analysis (Python)
- Tests a specific driver of LLM visibility — highly actionable for brands

Coding Python required (web scraping, API, statistics). No prior experience needed — willingness to learn is sufficient.

5

Measuring LLM-Referred Traffic

Research Question

- What publicly available methods can estimate LLM-originated traffic to brand websites without proprietary analytics?
- Explores: social media posts referencing LLM recommendations, third-party traffic tools, Reddit/YouTube NLP analysis
- Output: a methodological framework for future LLM traffic attribution studies

Methods & Relevance

- Web scraping (Reddit, forums) · NLP & topic modeling
- Comparison of traffic estimation tools · Framework development (Python)
- Addresses a key measurement gap

Coding Most coding-intensive topic. Python required (scraping, NLP, data wrangling). Strong willingness to learn is especially important here.