A Principled Framework for Naming New Frontier Language Models: Beyond Acronyms and Animals

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Abstract

As large language models (LLMs) advance rapidly in scale and capability, their names have taken on outsize importance across research, industry, and the public sphere. Yet, naming conventions for LLMs are largely ad hoc, blending acronyms, technical descriptors, and playful themes. We introduce the first principled framework for naming frontier LLMs, informed by semiotics, cognitive linguistics, and open science. Our approach provides guidelines, a taxonomy, and an automated assessment tool for model name selection, aiming to maximize clarity, memorability, fairness, and scientific utility. We analyze existing model names and conduct a pilot community survey, illustrating key challenges and opportunities. Our work serves as a foundational reference for future model creators and the NLP community.

1 Introduction

The past five years have witnessed a proliferation of large language models (LLMs) such as GPT [Brown et al., 2020], BERT [Devlin et al., 2019], and LLaMA [Touvron et al., 2023]. These names powerfully shape discourse in both scientific and public domains, influencing perception, credit assignment, and even model usage. Yet, there is no scientific or systematic process for naming, with model developers frequently opting for ad hoc conventions.

This paper is the first to propose a principled, evidence-informed framework for naming LLMs. We pose two fundamental questions:
(i) What makes an effective name for a frontier language model?
(ii) How can scientific rigor be injected into the naming process without sacrificing creativity or inclusivity?

2 Related Work

Previous naming conventions have largely emerged from arbitrary choices by research groups. OpenAI's "GPT" (*Generative Pretrained Transformer*) [Brown et al., 2020] and Google's "BERT" (*Bidirectional Encoder Representations from Transformers*) [Devlin et al., 2019] exemplify technical acronyms. More recent models like LLaMA (*Large Language Model Meta AI*) [Touvron et al., 2023] integrate institutional branding and playful animal motifs.

While papers describe architectures, naming choices are rarely justified or analyzed. Non-technical literatures on scientific naming (e.g., taxonomy, branding) provide some guidance [Aker and Koss, 2020, Jebens, 2020]. However, no formalized method exists for ML models.

3 A Taxonomy of LLM Names

We classify LLM names along three axes:

1. **Linguistic Structure**: Acronyms (e.g., "BERT"), Descriptors (e.g., "StableLM"), Hybrid/Playful (e.g., "LLaMA").

2. **Semiotic Content**: Technical (references to model/architecture), Reference (institution or person), Metaphoric (animals, natural forces), Value-based ("Stable," "Reliable").

3. **Community Orientation**: Open (generic or public good-oriented), Organizational, Proprietary.

4 Proposed Framework

We propose the **LAMEN** methodology: *Linguistic Appropriateness, Memorability, Equity, Neutrality*.

1. **Linguistic Appropriateness**: Name should reflect core innovation or function without jargon or ambiguity.

2. **Memorability**: Names should be easy to pronounce and recall, aided by cognitive and phonetic principles [Yarkoni, 2017].

3. **Equity**: Names must avoid cultural/linguistic biases and be accessible globally.

4. **Neutrality**: Names should not mislead, over-claim, or inadvertently assign blame or credit.

We supplement this with an *Automated Name Scoring* tool, calculating scores for pronounceability, similarity to existing models, and cross-lingual offensiveness (using multilingual wordlists).

5 Empirical Analysis

We analyze 30 recent frontier LM names, scoring them with our tool. We additionally conducted a pilot survey of 53 NLP practitioners and 27 laypersons, asking for name preferences and memory recall. Our findings include:

1. Animal-themed names are more memorable for laypersons.

2. Acronyms are clearer but less engaging.

3. Names with cultural references can introduce bias or confusion.

6 Guidelines for Future Model Naming

Bringing together semiotics, community preference, and empirical scoring, we suggest the following process for naming a new LM:

1. Use the LAMEN methodology for candidate shortlist.

2. Score with automated tool; filter out names with high confusion/bias risk.

3. Run a mini community feedback round in relevant language/cultural contexts.

4. Document naming rationale transparently in release notes for open science.

7 Conclusion & Future Work

As LLMs impact an expanding range of stakeholders, thoughtful naming will grow in importance for scientific communication, credit, and trust. Our framework is the first attempt to bring systematicity and equity to model naming. Future research could refine tools with larger surveys, incorporate cross-cultural focus groups, and model the downstream impact of naming choices.

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