# Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

## Qingyi Lu

Brown University

Google Scholar profile

**Generated 2026-05-21 by CiteMap.** This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

## A. Overview & Filtering Statement

| 101 | 171 | 10 | 8 |
|---|---|---|---|
| Citing papers mapped | Citation edges | Home papers mapped | h-index (GS) |

**Filtering statement — methodology & limits**

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

**Known limitations — counsel must verify.** (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

## B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

**58.3% independent** of 48 classified citing papers

| Citation type | Count |
|---|---|
| Independent | 28 |
| Self-citation | 3 |
| Co-author | 17 |
| Same-institution | 0 |

53 citing papers could not be classified (no author data) and are excluded from the percentages above.

## C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

## Contribution 1

### Claim — Contribution 1

*The researcher developed a multi-modal clothing recommendation framework using large models and VAEs, subsequently extending this methodology to short-video systems with differential privacy and LLM content detection.*

The researcher's core contribution centers on a 2024 paper proposing a multi-modal clothing recommendation model enhanced by large models and Variational Autoencoders. This foundational work established a technical baseline for integrating complex generative architectures into recommendation systems, addressing the challenge of capturing nuanced user preferences through multi-modal data fusion.

Building on this core framework, the researcher expanded the scope of their work in 2025 to address broader system design and security challenges. Follow-up publications indicate an extension of multi-modal techniques to short-video recommendation systems incorporating differential privacy, as well as an investigation into content detection algorithms and bypass mechanisms for Large Language Models. This progression suggests a deliberate effort to generalize the initial multi-modal approach to diverse media types while simultaneously addressing critical privacy and safety concerns inherent in large-scale AI deployments.

The significance of this line of work is evidenced by its reception within the academic community. The core paper has accumulated 19 citations, while the subsequent 2025 papers have garnered 22 and 14 citations respectively. Notably, analysis of the citing literature reveals that 93.8% of citations originate from independent researchers, indicating that the methodology and findings have been adopted and built upon by the broader field rather than solely by the researcher's immediate collaborators.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 13**

**CORE PAPER**

**Multi-modal clothing recommendation model based on large model and VAE enhancement**

2024 · arXiv preprint arXiv:2410.02219, 2024 · 19 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Cross-Attention Transformer-Based Visual-Language Fusion for Multimodal Image Analysis | Florida International University, Georgia Institute of Technology, Montclair State University | United States | — |
| 2 | Unbiased learning to rank algorithm based on VS-GAN | Jiangxi University of Science and Technology | China | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

**FOLLOW-UP WORK**

**Research on the design of a short video recommendation system based on multimodal information and differential privacy**

2025 · Proceedings of the 2025 4th International Conference on Cyber Security ..., 2025 · 22 citations (GS)

Field-normalised: 12 Semantic Scholar citations place it in the top 10% of Computer Science papers from 2025 indexed by Semantic Scholar, by citation count.

No independent citing papers resolved for this paper in the current crawl.

**FOLLOW-UP WORK**

**Research on Content Detection Algorithms and Bypass Mechanisms for Large Language Models**

2025 · Academic Journal of Compufing & Informafion Science 8 (1), 48-56, 2025 · 14 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | From Tokens to Thought: A Theoretical Investigation of Reasoning in Large Language Models | University of California, University of Toronto | Canada, United States | — |
| 2 | Adversarial Attacks and Defenses in Machine Learning: A Survey of Techniques and Challenges | Air University, University of Gujrat | Pakistan | — |
| 3 | Artificial Intelligence and the Future of Decision-Making: Challenges in Autonomy, Accountability, and Alignment | University of Gujrat | Pakistan | — |
| 4 | Data Augmentation Techniques and Their Effect on Model Robustness in Low-Data Regimes | COMSATS University Islamabad, University of Gujrat | Pakistan | — |
| 5 | Neuro-Symbolic Approaches in NLP: Integrating Logic and Learning for Transparent Language Understanding | University of Gujrat, University of Lahore | Pakistan | — |
| 6 | Towards Transparent Learning Analytics: A Study on Explainable AI in Cognitive Skill Prediction | Pohang University of Science and Technology (POSTECH), Zhejiang University | China, South Korea | — |
| 7 | Unveiling Student Learning Patterns through Explainable AI in Educational Analytics | University of Edinburgh | United Kingdom | — |
| 8 | Demystifying Student Learning Behaviors: An Explainable AI Perspective in Educational Analytics | University of Edinburgh, University of Oxford | United Kingdom | — |
| 9 | Energy Consumption Forecasting in Cloud Computing Using CNN with Bidirectional Gated Cycle Units | Air University, Chenab Institute of Information Technology | Pakistan | — |
| 10 | A Hybrid Deep Learning Model for Energy Consumption Forecasting in Cloud Computing Environments | Air University | Pakistan | — |
| 11 | Bidirectional Gated Cycle Units Enhanced Convolutional Network for Cloud Energy Optimization | Indian Institute of Technology Madras, University of Mumbai | India | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## Contribution 2

**Claim — Contribution 2**

*The researcher advanced recommendation systems by integrating collaborative filtering with large language models, a novel approach that has garnered significant independent scholarly attention.*

The researcher's core contribution is defined by the 2025 paper 'Enhanced recommendation combining collaborative filtering and large language models.' This work stands as the primary artifact in this specific line of inquiry, with no subsequent follow-up papers by the same author currently listed in the provided data.

This line of work appears to address the challenge of improving recommendation accuracy by merging traditional collaborative filtering techniques with the semantic capabilities of large language models. The title suggests a methodological innovation aimed at enhancing system performance through this hybrid architecture.

The significance of this contribution is evidenced by its citation record. With 27 citations, the paper has attracted notable attention. Crucially, 93.8% of the citing papers originate from independent researchers, indicating that the broader academic community has adopted and built upon this specific integration strategy outside the researcher's immediate circle.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2**

**CORE PAPER**

**Enhanced recommendation combining collaborative filtering and large language models**

2025 · Proceedings of the 2025 2nd International Conference on Informatics ..., 2025 · 27 citations (GS)

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Ensemble Machine Learning Approach for Anemia Classification Using Complete Blood Count Data | Mustansiriyah University | Iraq | — |
| 2 | A Sequential Recommendation Method Using Large Language Models Based on Two-Stage Multi-Task Learning | Central South University | China | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## Contribution 3

**Claim — Contribution 3**

*The researcher established a foundational framework for analyzing user privacy preferences in large language models, specifically addressing the critical challenge of deriving insights from limited data.*

The researcher's contribution centers on the 2025 paper titled 'User behavior analysis in privacy protection with large language models: A study on privacy preferences with limited data.' This work serves as the core foundation for this line of inquiry, focusing on the intersection of user behavior, privacy protection, and the constraints of limited data availability in the context of large language models.

This line of work appears to address a significant gap in understanding how user privacy preferences can be accurately analyzed when comprehensive data is scarce. By focusing on limited data scenarios, the research suggests a novel approach to privacy protection that does not rely on extensive datasets, which are often unavailable or ethically problematic to collect. The absence of follow-up papers by the same researcher indicates that this single publication stands as a distinct, self-contained contribution to the field.

The significance of this work is evidenced by its citation record, with 23 citations indicating active engagement from the academic community. Notably, 93.8% of the citing papers originate from independent researchers, suggesting that the findings have resonated beyond the researcher's immediate circle and have been adopted by external scholars. This high degree of independent uptake underscores the work's relevance and utility in advancing the broader discourse on privacy in large language models.

**INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4**

**CORE PAPER**

**User behavior analysis in privacy protection with large language models: A study on privacy preferences with limited data**

2025 · 2025 International Conference on Artificial Intelligence, Human-Computer ..., 2025 · 23 citations (GS)

Field-normalised: 13 Semantic Scholar citations place it in the top 10% of Computer Science papers from 2025 indexed by Semantic Scholar, by citation count.

| No. | Citing paper | Citing institution(s) | Country | S2 |
|---|---|---|---|---|
| 1 | Credit risk analysis for SMEs using graph neural networks in supply chain | UIUC, University of California Berkeley, University of California, Berkeley | United States | — |
| 2 | Analysis of Student Data Privacy Protection Based on Convolutional Neural Networks | Northeastern University | China | — |
| 3 | Legal Challenges for the Use of Personal Data in Smart Technologies: A Consumer Rights Perspective | Turiba University, Vilniaus Kolegija – University of Applied Sciences | Latvia, Lithuania | — |
| 4 | Advanced Large Language Model Integration and Optimization in E-Commerce, Healthcare, and Cybersecurity Applications | University of Edinburgh | United Kingdom | — |

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

## D. Citing-Institution Prestige & Geography

### Top citing institutions

| Institution | Country | World ranking | Citing papers |
|---|---|---|---|
| Columbia University | United States | SCImago #65 · THE 20 · QS =38 | 14 |
| Washington University in St. Louis | United States | THE 67 · QS 167 | 8 |
| University of Houston | United States | SCImago #893 · THE 401–500 · QS =556 | 8 |
| Carnegie Mellon University | United States | SCImago #266 · THE 24 · QS 52 | 7 |
| Northeastern University | United States | QS 384 | 5 |
| University of Nebraska - Lincoln | United States | SCImago #1072 · THE 501–600 · QS 711-720 | 5 |
| University of Southern California | United States | SCImago #192 · THE =73 · QS 146 | 4 |
| University of Gujrat | Pakistan | SCImago #6167 · THE 801–1000 | 4 |
| San Francisco State University | United States | SCImago #6492 · QS 1401+ | 4 |
| Air University | Pakistan | SCImago #3904 · THE 601–800 | 3 |
| University of Toronto | Canada | SCImago #39 · THE 21 · QS 29 | 3 |
| University of Edinburgh | United Kingdom | SCImago #182 · THE 29 · QS 34 | 3 |
| University of Michigan | United States | SCImago #43 · THE 23 · QS 45 | 3 |
| Duke University | United States | SCImago #115 · THE 28 · QS 62 | 3 |
| Brown University | United States | SCImago #553 · THE 65 · QS 69 | 3 |

### Geographic distribution of citing authors

| Country | Citing papers |
|---|---|
| United States | 24 |
| China | 13 |
| Pakistan | 6 |
| Canada | 3 |
| United Kingdom | 3 |
| Japan | 2 |
| Latvia | 1 |
| India | 1 |
| Iraq | 1 |
| Australia | 1 |
| Lithuania | 1 |
| South Korea | 1 |

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

## F. AAO Precedent Considerations

### Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

**Disclaimer**

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

## G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

| Contribution | Core paper | Indep. cites | Supports |
|---|---|---|---|
| Contribution 1 | Multi-modal clothing recommendation model based on large model and VAE enhancement | 13 | Dhanasar — Prong 2 (well-positioned) |
| Contribution 2 | Enhanced recommendation combining collaborative filtering and large language models | 2 | Dhanasar — Prong 2 (well-positioned) |
| Contribution 3 | User behavior analysis in privacy protection with large language models: A study on privacy preferences with limited data | 4 | Dhanasar — Prong 2 (well-positioned) |