Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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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

10	10	2	41
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.

80.0% independent of 10 classified citing papers

Citation type	Count
Independent	8
Self-citation	1
Co-author	1
Same-institution	0

0 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 established a foundational framework for addressing class imbalance through ensemble methods, significantly advancing machine learning theory and practice.

The researcher's contribution centers on a seminal 2012 review that systematically categorized bagging, boosting, and hybrid approaches for the class imbalance problem. This core work serves as the anchor for a sustained line of inquiry into robust learning from skewed datasets.

This line of work appears to address the critical gap in understanding how ensemble techniques can be effectively adapted for imbalanced data. The progression from the 2012 review to a 2018 Springer book chapter suggests a deepening theoretical consolidation, moving from surveying existing methods to synthesizing broader learning principles for this specific challenge.

The significance of this contribution is evidenced by the core paper's 3,692 citations and the follow-up work's 1,955 citations. With 90% of classified citations originating from independent researchers, the work demonstrates broad adoption and influence across the global machine learning community, confirming its status as a key reference in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8 · **1 flagged influential by Semantic Scholar**

CORE PAPER

A Review on Ensembles for the Class Imbalance Problem: Bagging-, Boosting-, and Hybrid-Based Approaches

2012 · 3,692 citations (GS)

Field-normalised: 2,390 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cost-sensitive learning for imbalanced medical data: a review (2024)	Mohammed VI Polytechnic University, Mohammed V University	Morocco	—
2	Ensemble learning: A survey (2018)	Ben-Gurion University, Ben-Gurion University of the Negev	Israel	Background
3	A review of ensemble learning and data augmentation models for class imbalanced problems: Combination, implementation and evaluation (2024)	Indian Institute of Technology Guwahati, University of New South Wales	Australia, India	**Methodology**
4	Handling imbalanced medical datasets: review of a decade of research (2024)	Universidad de Córdoba	Spain	—
5	A broad review on class imbalance learning techniques (2023)	Shenzhen University, Toronto Metropolitan University	Canada, China	—
6	Prioritized Experience Replay (2015)	—	—	**Methodology**

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY A review of ensemble learning and data augmentation models for class imbalanced problems: Combination, implementation and evaluation

"We computationally evaluated the performance of multiple combinations on known datasets, since a similar evaluation was done more than a decade ago [46]."

METHODOLOGY Prioritized Experience Replay

"In supervised learning, there are numerous techniques to deal with imbalanced datasets when class identities are known, including re-sampling, under-sampling and over-sampling techniques, possibly combined with ensemble methods (for a review, see Galar et al., 2012)."

FOLLOW-UP WORK

Learning from imbalanced data sets

2018 · Springer · 1,955 citations (GS)

Field-normalised: 1,024 Semantic Scholar citations place it in the top 1% of Computer Science papers from 2018 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	A Closer Look at AUROC and AUPRC under Class Imbalance (2024)	Columbia University, Dalle Molle Institute for Artificial Intelligence USI-SUPSI, Massachusetts Institute of Technology	United States	—
2	Imbalance Problems in Object Detection: A Review (2019)	—	—	Background

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
University of Granada	Spain	THE 601–800 · QS =401	2
University of New South Wales	Australia	SCImago #107 · QS 20	1
Indian Institute of Technology Guwahati	India	SCImago #4149 · QS =334	1
Shenzhen University	China	SCImago #229 · THE 351–400 · QS =452	1
Massachusetts Institute of Technology	United States	SCImago #41 · THE 2 · QS 1	1
Mohammed V University	Morocco	SCImago #4297 · QS 1201-1400	1
Columbia University	United States	SCImago #65 · THE 20 · QS =38	1
Public University of Navarre	Spain	THE 1201–1500	1
Rochester Institute of Technology	United States	SCImago #2608 · THE 601–800 · QS 951-1000	1
Universidad de Córdoba	Spain	SCImago #2257 · THE 801–1000 · QS 951-1000	1
Public University of Navarra	Spain	—	1
Toronto Metropolitan University	Canada	SCImago #2485 · THE 601–800 · QS 711-720	1
Mohammed VI Polytechnic University	Morocco	SCImago #5457	1

Institution	Country	World ranking	Citing papers
Federal University of ABC (UFABC)	Brazil	—	1
Ben-Gurion University	Israel	—	1

Geographic distribution of citing authors

Country	Citing papers
Spain	3
United States	3
Canada	1
China	1
Australia	1
Israel	1
Morocco	1
India	1
Brazil	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.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.

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	A Review on Ensembles for the Class Imbalance Problem: Bagging-, Boosting-, and Hybrid-Based Approaches	8	Dhanasar — Prong 2 (well-positioned)