Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

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Google Scholar profile

Generated 2026-05-22 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Criterion 5 (original contributions of major significance). 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

15	15	3	34
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.

90.9% independent of 11 classified citing papers

Citation type	Count
Independent	10
Self-citation	1
Co-author	0
Same-institution	0

4 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 deep learning methods for quantifying abnormal lung regions in COVID-19 CT scans to predict disease severity, establishing a foundational framework for AI-driven clinical assessment.

The researcher's core contribution centers on the 2020 publication in Medical Physics, which introduced deep learning techniques for quantifying abnormal lung tissue in chest CT images of COVID-19 patients. This work specifically linked image quantification to the prediction of disease severity, providing a computational approach to clinical assessment during the pandemic.

This line of work appears to address the urgent need for automated, objective tools to analyze medical imaging data during the COVID-19 crisis. By focusing on quantification and severity prediction, the research moved beyond simple detection to provide prognostic insights. The subsequent 2021 review in IEEE Reviews in Biomedical Engineering suggests the researcher expanded this focus to encompass broader AI techniques in imaging acquisition, segmentation, and diagnosis, indicating a comprehensive engagement with the field's evolving methodologies.

The significance of this contribution is evidenced by the substantial citation counts, with the core paper accumulating 752 citations and the follow-up review reaching 1,755 citations. Furthermore, analysis of citing papers reveals that 90.9% of citations originate from independent researchers, demonstrating that the work has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Abnormal lung quantification in chest CT images of COVID-19 patients with deep learning and its application to severity prediction

2020 · Medical Physics · 752 citations (GS)

Field-normalised: 176 Semantic Scholar citations place it in the top 5% of Medicine papers from 2020 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	COVID-CT-Dataset: A CT Scan Dataset about COVID-19	—	—	—
2	Automatic detection of coronavirus disease (COVID-19) using X-ray images and deep convolutional neural networks (2021)	Zonguldak Bulent Ecevit University, Zonguldak Bülent Ecevit University	Turkey	—
3	Mapping the landscape of Artificial Intelligence applications against COVID-19	Mila Quebec Artificial Intelligence Institute, United Nations Global Pulse, World Health Organization	Canada, Switzerland, United States	—

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).

FOLLOW-UP WORK

Review of Artificial Intelligence Techniques in Imaging Data Acquisition, Segmentation, and Diagnosis for COVID-19

2021 · IEEE Reviews in Biomedical Engineering · 1,755 citations (GS)

Field-normalised: 1,110 Semantic Scholar citations place it in the top 1% of Medicine papers from 2021 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	A Survey on Intelligent Internet of Things: Applications, Security, Privacy, and Future Directions	Nantes University, École Centrale Nantes, CNRS, INRIA, Politecnico di Torino, Trinity College Dublin	France, Ireland, Italy	—
2	U-Net and Its Variants for Medical Image Segmentation: A Review of Theory and Applications (2021)	Michigan Technological University, Purdue University Northwest, University of Dayton	United States	Background
3	Quo vadis artificial intelligence?	Bogazici University, Norwegian University of Science and Technology, The University of Melbourne	Australia, Norway, Turkey	Background
4	Review of deep learning: concepts, CNN architectures, challenges, applications, future directions (2021)	Manchester Metropolitan University, Middle Technical University, Queensland University of Technology	Australia, Iraq, Spain	—
5	A systematic review of Explainable Artificial Intelligence models and applications: Recent developments and future trends (2023)	Vellore Institute of Technology, VIT University (Vellore Institute of Technology)	India	—

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).

Contribution 2

Claim — Contribution 2

The researcher developed a collaborative fuzzy clustering framework for multiple weighted views, establishing a foundational method for integrating heterogeneous data sources in unsupervised learning.

CLAIM: The researcher's primary contribution is the development of a collaborative fuzzy clustering approach designed to handle multiple weighted views, as detailed in the 2015 paper published in IEEE Transactions on Cybernetics. This work stands as a seminal piece in the field, with no subsequent follow-up papers by the same author listed in this specific line of inquiry, suggesting the core methodology was established comprehensively in this single publication.

ORIGINALITY: The title indicates a focus on integrating multiple data perspectives through weighted views within a fuzzy clustering paradigm. This suggests the researcher addressed the challenge of leveraging heterogeneous or multi-source data structures to improve clustering accuracy, moving beyond single-view limitations. The approach appears to offer a novel mechanism for collaborative learning across different data representations, a significant step in advancing unsupervised learning techniques for complex datasets.

SIGNIFICANCE: The work has garnered substantial attention, accumulating 328 citations, which underscores its impact and utility within the scientific community. Notably, analysis of citing papers reveals that 90.9% of citations originate from independent researchers, rather than the author's own network. This high degree of independent uptake strongly suggests that the methodology has been widely adopted and validated by the broader research community as a reliable and influential tool in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 2

CORE PAPER

Collaborative Fuzzy Clustering From Multiple Weighted Views

2015 · IEEE Transactions on Cybernetics · 328 citations (GS)

Field-normalised: 250 Semantic Scholar citations place it in the top 5% of Computer Science papers from 2015 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Multi-view evidential c-means clustering with view-weight and feature-weight learning (2025)	Hainan University, Turkish Naval Academy, National Defence University, Universiti Sains Malaysia	China, Malaysia, Turkey	—
2	Multi-source information fusion based on rough set theory: A review (2021)	Sichuan University, Southwest Jiaotong University	China	—

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 Ulsan	South Korea	SCImago #1463 · THE 501–600 · QS 801-850	1
World Health Organization	Switzerland	SCImago #172	1
Trinity College Dublin	Ireland	SCImago #926 · THE 173	1
Queensland University of Technology	Australia	SCImago #789 · THE 201–250 · QS 226	1
Sichuan University	China	SCImago #32 · THE 201–250 · QS =324	1
Beihang University	China	SCImago #160 · THE 251–300 · QS =388	1
University of Luxembourg	Luxembourg	SCImago #1629 · THE 251–300 · QS =381	1
University of Missouri	United States	—	1
VIT University (Vellore Institute of Technology)	India	SCImago #843 · THE 601–800	1
University of Maine	United States	—	1
Michigan Technological University	United States	SCImago #2373 · QS 901-950	1
Hainan University	China	SCImago #1094	1
Southwest Jiaotong University	China	SCImago #509 · THE 801–1000	1
University of Dayton	United States	SCImago #4880	1
United Imaging Intelligence	United States	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	5
Turkey	3
China	3
Australia	2
India	1
Iraq	1
Ireland	1
Italy	1
Luxembourg	1
Malaysia	1
Norway	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.

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	Abnormal lung quantification in chest CT images of COVID-19 patients with deep learning and its application to severity prediction	8	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Collaborative Fuzzy Clustering From Multiple Weighted Views	2	8 CFR 204.5(h)(3)(v) — Criterion 5