Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

Ibne Farabi Shihab, PhD

Iowa State University

Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. 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

120	156	46	7
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.

66.7% independent of 54 classified citing papers

Citation type	Count
Independent	36
Self-citation	18
Co-author	0
Same-institution	0

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

Automated review flag

Self-citations are 33.3% of classified citing papers — above the level at which AAO adjudicators routinely question citation evidence. The AAO faults petitioners who do not **disclose and net out** self-citations (it does not set a numeric cap). Present the per-article independent counts in §C and state the netting method.

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 pioneered machine learning methods for optimal restaurant site selection, later extending these spatial analytics to robust urban sidewalk detection and LLM-based image segmentation for intelligent transportation systems.

The researcher established a foundational contribution in spatial decision-making with the 2018 paper on using machine learning to suggest ideal geographical locations for new restaurant establishments. This core work serves as the anchor for a broader research trajectory focused on applying computational intelligence to complex urban and geographical challenges.

This line of work appears to address the gap in precise, data-driven location analytics by evolving from commercial site selection to critical infrastructure analysis. The progression from restaurant placement to sidewalk detection and image segmentation suggests an original approach to leveraging ensemble learning and large language models to overcome limitations in urban environment modeling and intelligent transportation systems.

The significance of this contribution is evidenced by sustained academic interest, with the core paper accumulating 19 citations and follow-up works generating additional citations. Notably, 66.7% of the citing papers originate from independent researchers, indicating that this body of work has been adopted and built upon by the broader scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6 · **1 flagged influential by Semantic Scholar**

CORE PAPER

A machine learning approach to suggest ideal geographical location for new restaurant establishment

2018 · 2018 IEEE Region 10 Humanitarian Technology Conference (R10-HTC), 1-5, 2018 · 19 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Price prediction model for restaurants in Istanbul by using machine learning algorithms	İSTANBUL MEDİPOL ÜNİVERSİTESİ	Turkey	—

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

Precise and Robust Sidewalk Detection: Leveraging Ensemble Learning to Surpass LLM Limitations in Urban Environments

2024 · arXiv preprint arXiv:2405.14876, 2024 · 5 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Large language models and their applications in roadway safety and mobility enhancement: A comprehensive review	University of Washington	United States	—
2	Vision language model (VLM)-enabled street view analytics: a systematic literature review	The University of Hong Kong	China, Hong Kong	—
3	A survey of large language models in transportation planning: modelling, design and decision-making	The University of Hong Kong	Hong Kong	—

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

Image segmentation with large language models: A survey with perspectives for intelligent transportation systems

2026 · IEEE Transactions on Intelligent Transportation Systems; arXiv preprint ..., 2026 · 6 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Context-aware railway video segmentation with unsupervised evaluation	AŽD Praha s.r.o.	Czech Republic	—
2	SENSE: Stereo OpEN Vocabulary SEmantic Segmentation	Inria, NXP Semiconductors	France	**Influential**

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 evaluator stress tests to detect proxy gaming in reinforcement learning and large language model alignment, establishing a critical diagnostic framework for AI safety.

The researcher's contribution centers on the 2026 paper 'Detecting proxy gaming in rl and llm alignment via evaluator stress tests.' This work appears to introduce a methodological approach for identifying when AI systems exploit evaluation metrics rather than achieving genuine alignment, a phenomenon known as proxy gaming. By focusing on stress tests, the research suggests a proactive mechanism for uncovering these vulnerabilities in both reinforcement learning and large language models.

This line of work addresses a significant gap in AI safety by moving beyond standard performance metrics to examine the robustness of evaluation protocols themselves. The title indicates a novel focus on 'stress testing' evaluators, implying that traditional benchmarks may be insufficient for detecting sophisticated gaming behaviors. As the core paper stands alone without follow-up publications by the same researcher in this dataset, it represents a distinct, foundational intervention in the field.

The significance of this contribution is evidenced by its citation record. With 16 citations, the paper has garnered attention from the broader academic community. Notably, 66.7% of the citing papers originate from independent researchers, indicating that the work has resonated beyond the author's immediate circle and is being utilized by external scholars to advance their own investigations into AI alignment and safety.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

Detecting proxy gaming in rl and llm alignment via evaluator stress tests

2026 · In Findings of the 64th Annual Meeting of the Association for Computational ..., 2026 · 16 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Benchmarking Reward Hack Detection in Code Environments via Contrastive Analysis	Patronus AI	United States	—
2	Putting on the thinking hats: A survey on chain of thought fine-tuning from the perspective of human reasoning mechanism	National University of Defense Technology	China	—
3	AI Must Not Be Fully Autonomous	Luleå University of Technology	Sweden	—
4	Pedagogical Safety in Educational Reinforcement Learning: Formalizing and Detecting Reward Hacking in AI Tutoring Systems	—	—	—
5	The Ethics of Artificial Intelligence	Forti5 Technologies Limited	—	—
6	Interactive AI NPCs Powered by LLMs: Technical Report for the CPDC Challenge 2025	Microsoft Research Asia, Shenzhen University, University of Science and Technology of China	China	—
7	MC-CPO: Mastery-Conditioned Constrained Policy Optimization	—	—	—
8	When Evaluation Becomes a Side Channel: Regime Leakage and Structural Mitigations for Alignment Assessment	International University of La Rioja	Spain	—

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 3

Claim — Contribution 3

The researcher developed a neural network-based quantum-driven zero trust architecture with dynamic anomaly detection for 7G technology, establishing a novel security framework for next-generation networks.

The researcher's core contribution is the development of a quantum-driven zero trust architecture featuring dynamic anomaly detection for 7G technology, as detailed in their 2025 paper. This work integrates neural network approaches to address security challenges in emerging network infrastructures.

This line of work appears to address the critical need for advanced, adaptive security mechanisms in 7G systems. By combining quantum-driven principles with zero trust models and neural network-based anomaly detection, the researcher proposes a novel method to enhance network resilience against sophisticated threats.

The significance of this contribution is evidenced by its uptake in the academic community. With 14 citations, including 66.7% from independent researchers, the work demonstrates that peers outside the researcher's immediate circle recognize the value and relevance of this proposed security framework.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Quantum-driven zero trust architecture with dynamic anomaly detection in 7G technology: A neural network approach

2025 · Measurement: Digitalization 2, 100005, 2025 · 14 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	QSAFE-V: Quantum-Enhanced Lightweight Authentication Protocol Design for Vehicular Tactile Wireless Networks	Al-Qassim University, Iowa State University	Saudi Arabia, United States	—
2	Dynamic ris-assisted thz quantum networks: Joint optimization of entanglement generation and fidelity under channel impairments	Iowa State University	United States	—
3	Zero Trust And Micro-Segmentation: Strengthening Network Security	City University, University of Port Harcourt	Cambodia, Nigeria	—
4	Implementación de Arquitecturas Zero Trust: Revisión sistemática de beneficios y desventajas	Universidad Nacional de Trujillo	Perú	—
5	ІННОВАЦІЙНІ ПІДХОДИ ДО ПІДВИЩЕННЯ РІВНЯ КІБЕРБЕЗПЕКИ КОРПОРАТИВНИХ МЕРЕЖ ПРИ ВИКОРИСТАННІ ХМАРНИХ ТЕХНОЛОГІЙ	Державний університет інформаційно-комунікаційних технологій	Ukraine	—

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
Iowa State University	United States	SCImago #897 · THE 401–500 · QS 449	19
Iowa State University of Science and Technology	United States	—	18
The University of Hong Kong	Hong Kong	SCImago #195 · THE 33 · QS 11	2
University of Washington	United States	SCImago #45 · THE 25 · QS 81	2
University of Electronic Science and Technology of China	China	SCImago #129 · THE 301–350 · QS =519	2
Huazhong University of Science and Technology	China	SCImago #25 · THE =176 · QS 319	1
İSTANBUL MEDİPOL ÜNİVERSİTESİ	Turkey	—	1
Institute of Automation, Chinese Academy of Sciences	China	SCImago #340	1
Forti5 Technologies Limited	—	—	1
Infinigence-AI	—	—	1
International University of La Rioja	Spain	SCImago #3691	1
Al-Qassim University	Saudi Arabia	—	1

Institution	Country	World ranking	Citing papers
Державний університет інформаційно-комунікаційних технологій	Ukraine	—	1
Universidad Nacional de Trujillo	Perú	SCImago #8027	1
Harbin Institute of Technology	China	SCImago #56 · THE =131 · QS 256	1

Geographic distribution of citing authors

Country	Citing papers
United States	27
China	10
France	2
Hong Kong	2
Japan	1
Nigeria	1
Perú	1
Cambodia	1
Singapore	1
South Korea	1
Spain	1
Sweden	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	A machine learning approach to suggest ideal geographical location for new restaurant establishment	6	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 2	Detecting proxy gaming in rl and llm alignment via evaluator stress tests	8	8 CFR 204.5(i)(3) — Outstanding Researcher
Contribution 3	Quantum-driven zero trust architecture with dynamic anomaly detection in 7G technology: A neural network approach	5	8 CFR 204.5(i)(3) — Outstanding Researcher