

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

STRENGTHS: + Applicant combines impressive technical strengths in the interdisciplinary fields of sociology, computer science, and machine learning and is committed to tackling core challenges in the social sciences. + Applicant is both analytically crisp and unusually creative + Applicant made substantive contributions to, and in some cases spearheaded, several research projects in social sciences, genetics, and machine learning, resulting in first-author workshop and journal publications. This work involved collaborations with researchers and practitioners from different fields and institutes, demonstrating the applicant's interdisciplinary strengths and commitment. + Applicant is a mature researcher with the potential to continue to make significant contributions to machine learning and the social sciences. WEAKNESSES: None identified

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

STRENGTHS: + Applicant has demonstrated a commitment to tackling a diverse array of core societal problems with real impact. + The combination of interdisciplinary expertise and passion for statistics, machine learning, and the social sciences will be critical to addressing problems WEAKNESSES: None identified

Summary Comments

The applicant combines impressive technical strengths with an unusual level of creativity in the interdisciplinary fields of machine learning, statistics, and the social sciences. The applicant is genuinely committed to leveraging these strengths to tackle core societal problems. The applicant demonstrates

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Explanation to Applicant

The applicant proposes to investigate causal inference, in particular how to embed it into a deep learning framework. As described in the proposal, the applicant has already carried out several applied research projects, in topics ranging from genetics to politics. In addition to a stellar academic record, the letters of recommendation are very strong. Overall, the applicant seems well-suited for the proposed work. As a nitpick, I would have liked to see more details on the datasets and experiments that will be used. Different domains call for different models/strategies, so it would have been good to confirm that the proposed work is likely to work for the domains in question.

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Explanation to Applicant

As I noted above, the applicant has already carried out research projects in different fields. More generally, and as the letters of recommendation confirm, the applicant shows an interest in multidisciplinary research that may yield high medical and socioeconomic benefits. I believe that the applicant has strong potential to make positive scientific contributions. My only concern is that the wide range of projects indicate that the applicant may not be certain what area to focus on yet, but this should become clear early in graduate school.

Summary Comments

This is a very strong application and should be funded.

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Explanation to Applicant

The applicant's research plan is theoretically rigorous and very well written, describing two potential application domains. The applicant has published or has submitted manuscripts in top venues in diverse (and disparate) domains.

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Explanation to Applicant

The applicant has a track record of using computational techniques to increase awareness and mitigate non compliance. Reference letters speak to the applicant's passion for social science and motivation to positively impact the society.

Summary Comments

The applicant has outstanding grades, varied work experience, and strong reference letters. The proposed research topic of representation learning for causal inference is well motivated.