

Score for Fan, Jean

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The candidate has an excellent academic record including 1 publication, several national/international conference proceedings and presentations, the Harvard-MIT Division of Health Science and Technology BIG Award, the Johns Hopkins University Provost's Undergraduate Research Award, and Dean's List.

The candidate has provided a comprehensive past to future research direction where the transition/translational components have been clearly demonstrated. In addition, the proposed research has great scientific merit for enhancing current level of understanding. The candidate may benefit even more with the demonstration of extended research effort in specific area(s) of interest.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The potential benefit to society has been demonstrated through the mind-set of "pay forward the language assistance and volunteered to tutor non-native English-speaking students with math...", fun method of teaching STEM subjects, and continuing collaborative outreach with Weizmann Institute of Science in Israel. In addition, the candidate has demonstrated interests for pursuing academic career which would integrate research and education.

Score for Fan, Jean

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

The applicant proposes to use Bayesian Networks to study how genetic and environmental factors contribute to disease etiology. The applicant has a strong research background as well as a history of assisting others with learning. These suggest an excellent ability to perform on both a team and as an individual. The research plan is reasonably complete, even for a more advance student. These factors strongly suggest a good opportunity for success.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Very Good

Explanation to Applicant

Successful completion of the research plan would provide a tremendous potential impact on the understanding of disease in terms of identification of the underlying factors of specific diseases over a broad range. It may also thrust the field of bioinformatics forward. Moreover, the applicants interest in teaching and transfer of knowledge have the potential to affect a broad range of future students. However, the plan seems complex and it is difficult to predict how successful the applicant will be.

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Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The applicant has significant research experience, with a first author publication and a presentation at a national meeting. These previous experiences indicate that the applicant will be a successful researcher in graduate school.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Good

Explanation to Applicant

The applicant has been involved in outreach through the design of educational software. There is a vague mention of continued outreach in the future, but no clear plan for implementing broader impacts in the future. The broader impacts criteria were also not explicitly outlined throughout the application.