

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Very Good

Explanation to Applicant

The applicant's remarks were very limited with regard to intellectual merit, almost as worded in summary format. However, support of intellectual merit was seen within their expressed history and journey to arrive in this place and time within their research career. Additionally, it was through this applicant's expressed understanding of the possibilities in which their research efforts may impact the field that truly supported this area of merit.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

The applicant showcased a true alignment between their previous and current research capabilities to that of their ability to make broader impacts within their field of interest. The applicant demonstrated a true awareness of how their prior research exposure and personal history could support a true path to broader impact attainment. Additionally, the applicant was able to express a true affinity for the subject matter. This affinity makes the difference between failure and success to disseminate findings and support the field of knowledge and provides the applicant with the support needed to succeed in this category.

Summary Comments

It was overwhelmingly clear that the applicant is confident in their abilities to conduct succinct research in their field of knowledge and their ability to succeed while understanding the importance their role may play in future events. Additionally, the applicant was able to demonstrate how they would create a greater impact within this specialty field of interest. Lastly, through project overview and discussion, the applicant demonstrated how a project of this magnitude can provide immediate real-world solutions, but solutions that can be developed well into the future.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit

Excellent

Explanation to Applicant

The proposal presents deep learning based speech processing for diagnosing neurological disease and tracking its progression. The PI has an impressive track records on research experiences in interdisciplinary subjects at various research labs and industry. The publication record of the PI is also very impressive. The PI is well qualified to conduct the proposed research, and adequate resources are available. The proposed research method is novel and will have significant impact on healthcare applications, and may also contribute to other areas where natural language processing is applicable.

Broader Impacts Criterion

Overall Assessment of Broader Impacts

Excellent

Explanation to Applicant

Ratings Sheet

The project has broader impacts including improving well-being for individuals with neurological conditions and bringing together academic and industry. The broader impacts could be stronger if some education and outreach activities are planned.

Summary Comments

The project presents interdisciplinary research in machine learning, natural language processing, and neurological disorder. The PI has strong multidisciplinary research experience, and the proposed scientific research is unique. The proposal is strong in almost every aspect.

Intellectual Merit Criterion**Overall Assessment of Intellectual Merit**

Very Good

Explanation to Applicant

+ This proposal is to build domain-informed DL models that overcome the problem of data sparsity in dysarthric speech by leveraging specialist understanding of the physical mechanisms and by working to further adapt existing transfer learning techniques. + The topic is important and interesting. This work could potentially lead to insights that improve neural network performance. - The proposal could be further strengthened if the student could provide more details on the project tasks.

Broader Impacts Criterion**Overall Assessment of Broader Impacts**

Excellent

Explanation to Applicant

+ The proposed research activity could improve wellbeing of people with neuromuscular disease, and ensure that persons with disabilities. - The review suggests the student add a plan for outreach activities.

Summary Comments

This proposal is to build domain-informed DL models that overcome the problem of data sparsity in dysarthric speech. The proposal could be further strengthened if the student could provide more details on the project tasks, and provide a plan for outreach activities.