Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
The applicant has achieved perfect academic performance and has extensive research internship experience. The publication record demonstrates their research ability. The research plan is clear and indicates the applicant's understanding of how to conduct high-quality research and potential to be successful in graduate study.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Very Good

Explanation to Applicant
The research plan highlights how the research direction could potentially benefit domains beyond AI, such as public policy and rapid disaster response. The applicant also demonstrates a passion for mentorship and a strong commitment to making a broader impact.

Summary Comments
The applicant demonstrates strong motivation to impactful research. The exceptional background and past experience makes them well prepared for a successful career in research and graduate study.

Intellectual Merit Criterion

Overall Assessment of Intellectual Merit
Excellent

Explanation to Applicant
Strengths: 1. The student is well-prepared for graduate school. They have made an active effort to acquire research experience during their undergraduate tenure, and successfully carried several projects to completion. Their mentors at ASU and AFRL speak confidently to the quality of their work. They are uniquely qualified to perform the plan proposed, having prior results using fault injectors with different types of neural architectures. 2. The research proposal is well-crafted and ambitious. The idea seems novel, well-grounded in prior work, and the student has a solid plan for assessing success. Weaknesses: 1. Having no letter from Dr. Hannah Kerner (who the student says will supervise this work) makes it harder to assess the feasibility of the proposed project. I am admittedly not familiar with Earth observation data.

Broader Impacts Criterion

Overall Assessment of Broader Impacts
Excellent

Explanation to Applicant
Strengths: 1. The student has an impressive record of broader impact activities as an undergraduate student: ROTC, Air Force Research internships, and mentoring experiences. They have excelled in all of them, while maintaining a perfect GPA. 2. If successful, the research plan has high impact potential -- being able to deploy fault tolerant geospatial models in satellites could enable prompt response in emergency situations, and enable the study of comprehensive real-time data.

Summary Comments

Student has a very strong and unique background -- perfect GPA, ample research experience in both academia and national labs, ROTC. They seem uniquely qualified for their proposed project. All letter writers speak very highly of their work ethic, intellectual rigor and preparedness for graduate school. The research agenda is highly impactful. The proposal is very well written. The scope is appropriate and the questions ambitious.