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UNIVERSITY of HAWAI'I® MĀNOA

June 3, 2025

NASA EPSCoR ISS Flight Opportunity Review Committee

To Whom It May Concern:

I am pleased to provide this letter in support of undergraduate researcher Shelby Dixon's proposal titled "Autonomous, Low-Power AI System for Plant Health Monitoring in Space and Resilient Agriculture", submitted for consideration under the 2025 NASA EPSCoR ISS Flight Opportunity.

As an Associate Professor in the Department of Electrical and Computer Engineering at the University of Hawai'i at Mānoa, I have had the opportunity to instruct Shelby in our computer architecture and FPGA course. Throughout the course, Shelby consistently demonstrated intellectual curiosity and a strong aptitude for solving complex engineering challenges through hands-on engagement.

This proposal exemplifies her ability to translate classroom learning into real-world solutions. Her project blends embedded sensing, Verilog-based fault-tolerant logic, and low-power, real-time inference—all within the stringent constraints of a 3U space platform. These contributions reflect the interdisciplinary thinking and applied technical skills required for successful experimentation aboard the ISS.

Although I am not providing direct funding or technical resources for this initiative, I am enthusiastic in my support of Shelby's effort to integrate embedded systems design with applications that benefit both space exploration and local agricultural resilience in Hawai'i.
Sincerely,

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