

HES - Volunteering Program Verification Form

This form is to be used to document volunteering hours. If a student volunteers for multiple organizations, a separate form must be used for each organization. **This form must be turned in by the 28th of each month, the latest.**

I certify that the scholar Bader Ammar Houran completed a total of 5 hours of service at InnovaThrive.

The hours were completed hours as per the below:

Hours # 2 (date) _2/12 – 6/12_ (initials of supervisor) __A.K.__

Hours # 3 (date) _9/12 – 13/12_ (initials of supervisor) __A.K.__

Hours # 0 date) _16/12 – 20/12 (initials of supervisor) __A.K.__

Hours # 0 date) _23/12 - 27/12 (initials of supervisor) __A.K.__

Brief description of the activities the scholar performed or participated in:

Research on AI for Disaster Risk Modeling in Urban Areas

My research focuses on the use of AI in disaster risk modeling for urban areas, specifically looking at how machine learning models and geospatial AI tools can predict and map hazards like floods, earthquakes, and fires. By analyzing historical data, AI can identify risk patterns and predict which areas are most vulnerable to natural disasters. This helps in optimizing urban infrastructure to withstand such events, with studies showing that AI can reduce disaster risk in urban planning by 35%.

Key applications include using AI to pinpoint flood-prone regions, earthquake fault lines, and fire zones, allowing for proactive mitigation strategies. The advantages of these AI tools are the ability to anticipate disasters and prepare in advance, minimizing loss and damage. However, challenges such as the high initial costs of AI systems and the need for collaboration across various sectors, such as urban planning and disaster management, were also highlighted.

Looking ahead, future research will focus on real-time hazard monitoring systems and AI models that incorporate climate change factors to improve long-term risk predictions. These findings will be compiled into a comprehensive report and presentation for stakeholders, with a goal of enhancing urban resilience and reducing disaster impact.

Written feedback about the scholar's performance:

Bader's research on AI for disaster risk modeling in urban areas effectively demonstrated AI's potential in disaster prediction. His focus on integrating climate change into future models was a valuable contribution.

Please rate the overall performance of the scholar at your organization:

	Mastery (5)	Proficient (3)	Emerging (1)
Problem solver	X		
Engaged & Committed	X		
Open-minded & multicultural	X		

Signature & stamp Andrew El Kahwaji

Printed Name Andrew El Kahwaji

Date 26/12/2024

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CEO of InnovaThrive