

### 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 28<sup>th</sup> of each month, the latest.**

I certify that the scholar Mariam Al Flity completed a total of 5 hours of service at InnovaThrive.

The hours were completed hours as per the below:

Hours # 0 (date) \_2/12 – 6/12\_ (initials of supervisor) \_\_A.K. \_\_

Hours # 0 (date) \_9/12 – 13/12\_ (initials of supervisor) \_\_A.K. \_\_

Hours # 5 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:

AI in Predicting and Managing Supply Chain Risks

Definition:

Exploring the role of artificial intelligence in identifying, assessing, and mitigating risks across global supply chains to enhance resilience and efficiency.

Key Technologies:

Predictive Analytics: Forecasts potential geopolitical, economic, and environmental disruptions.

Machine Learning (ML): Enables real-time monitoring and analysis of inventory, shipping routes, and supplier networks.

Applications:

Early Warning Systems: AI detects patterns indicating potential delays caused by natural disasters, strikes, or political instability.

Automated Inventory Management: Machine learning predicts and automates responses to inventory shortages, minimizing downtime.

Statistics:

Research indicates that AI adoption can enhance supply chain resilience by up to 25%, reducing the frequency and impact of disruptions.

## Advantages:

**Financial Risk Reduction:** AI helps preemptively address issues, lowering unexpected losses.

**Operational Flexibility:** AI enables supply chains to quickly adapt to evolving market demands and external pressures.

## Disadvantages:

**Implementation Costs:** Deploying AI across complex, multi-tiered supply chains can be expensive.

**Technical Expertise:** Continuous maintenance and upgrades require skilled personnel.

## Challenges:

**Data Accuracy:** Ensuring the reliability of data from various international sources can be difficult.

**Integration with Existing Systems:** AI must seamlessly integrate with legacy supply chain platforms.

## Future Research Directions:

**Long-Term Trend Prediction:** Developing AI models to forecast long-term supply chain trends and vulnerabilities.

**Blockchain Integration:** Combining AI with blockchain technology to enhance transparency, traceability, and security in global trade networks.

## Written feedback about the scholar's performance:

Mariam Al Flity's research on AI in predicting and managing supply chain risks showcased a forward-thinking approach to global logistics. Her detailed exploration of predictive analytics and machine learning applications demonstrated a clear understanding of AI's role in enhancing resilience. By addressing challenges such as data accuracy and integration, Mariam highlighted the complexities of AI adoption in supply chains.

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

	Mastery (5)	Proficient (3)	Emerging (1)
<b>Problem solver</b>	X		
<b>Engaged &amp; Committed</b>	X		
<b>Open-minded &amp; multicultural</b>	X		

Signature & stamp *Andrew El Kahwaji*

Printed Name Andrew El Kahwaji

Date 26/12/2024

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CEO of InnovaThrive

