



Contribution ID: 186

Type: Session

Leveraging Data Science and AI to Eradicate Modern Slavery

*Thursday 16 October 2025 11:00 (1h 30m)***Abstract:**

Modern slavery affects over 50 million individuals globally, millions being subjected to forced labour that infiltrates the supply chains of major corporations. This session explores the pivotal role of data science and artificial intelligence (AI) in combating modern slavery, bringing together perspectives from academia, non-profit organisations, and government agencies. By highlighting innovative methodologies and collaborative efforts, the session will demonstrate how data-driven approaches can enhance actions to fight against modern slavery. The session will conclude by celebrating the success of a pre-conference hackathon focused on this critical issue, showcasing creative data-driven solutions developed by participants and announcing the winning teams.

Significance of the Issue:

The pervasive nature of modern slavery presents significant challenges to human rights and economic development worldwide. Accurate data collection and analysis are essential for understanding the scope of the problem, identifying vulnerable populations, and formulating effective interventions. The integration of AI and data science offers unprecedented opportunities to process vast amounts of information, uncover hidden patterns, and predict risk factors associated with modern slavery. This session will address the critical need for interdisciplinary collaboration and technological innovation in tackling this global issue.

Session Structure and Agenda:**Introductory Remarks (5 min)****Understanding Modern Slavery Estimates and: (10 min)**

A representative from the Walk Free Initiative, authors of the Global Slavery Index, will provide an in-depth analysis of current methodologies for estimating modern slavery prevalence and the challenges in data collection and interpretation. The Global Slavery Index offers national estimates of modern slavery for 160 countries, drawing on data from household surveys and assessments of national-level vulnerability.

Question from Moderator: "Could you please elaborate on the challenges faced in measuring the prevalence of modern slavery and how we can ensure the collection of robust and reliable data to accurately inform policy and action against modern slavery?"

Understanding the Legal Landscape Addressing Modern Slavery in Global Supply Chains: (5 min)

A representative from the Australian Attorney-General's Department will discuss the Modern Slavery Act, outlining expectations for businesses and situating the law within the global regulatory landscape. This presentation will provide an overview of compliance requirements and the role of legislation in combating modern slavery.

Question from Moderator: "What are the challenges your organisation faces when manually reviewing thousands of modern slavery reports annually, and how do you envision leveraging technology to enhance the efficiency and effectiveness of monitoring compliance with modern slavery legislation?"

Practical Applications of Data Science and AI in Business Compliance with the Modern Slavery Act: Data Visualisation: Beyond Compliance Initiative: (10 min)

Insights from WikiRate and Walk Free on their Beyond Compliance project will be presented. This initiative includes a comprehensive visualisation dashboard assessing over 2,000 modern slavery statements, highlighting the role of businesses in addressing this issue and informing policy.

Question from Moderator: Given the importance of corporate transparency and accountability in combating modern slavery, how do you see this application of data science and AI creating more transparency in supply chains in response to the Modern Slavery Act and beyond?

Introduction to Project AIMS (Artificial Intelligence against Modern Slavery): (25 min)

Researchers from Queensland University of Technology (QUT) and Mila will present Project AIMS, which leverages ethical development of AI to analyse corporate reporting data and promote compliance with modern slavery laws. The project has developed the largest dataset of annotated modern slavery statements used to assess compliance with the Australian Modern Slavery Act and has fine-tuned and benchmarked AI models on this dataset. All the resources are shared *open source*, and the peer-reviewed research presented at conferences such as ICLR and ACL will be discussed.

Question from Moderator: What are some of the key findings from peer-reviewed academic papers?

Question from Moderator: What were some of the key developmental challenges and successes of the project?

Question from Moderator: How can this work scale to other jurisdictions?

Hackathon Outcomes: (15 min)

Presentation of finalist solutions' pitches from a recent hackathon focused on Project AIMS, culminating in the announcement of the winners. This segment will highlight the potential of collaborative, community-driven approaches in developing technological solutions to combat modern slavery.

Q&A (15 min)

Proposed Speakers:

Moderator: Distinguished Professor Kerrie Mengersen, Founding Director, QUT Centre for Data Science

Speakers:

Katharine Bryant: Director, Walk Free. (to be confirmed)

Representative from the Australian Attorney-General's Department (TBD) (to be confirmed)

Auréliane Froehlich –Program Manager, WikiRate (to be confirmed)

Adriana Eufrosina Bora –PhD Candidate, QUT and Project Lead, Mila.

Jerome Solis: Director, AI for Humanity, Mila (to be confirmed)

Intended Outcomes:

Enhance awareness of modern slavery issues and the importance of data-driven approaches in identifying and combating such practices.

Demonstrate the practical applications of data science and AI in assessing and ensuring compliance with modern slavery legislation.

Foster collaboration among academia, non-profits, and government entities to develop scalable solutions for eradicating modern slavery.

Emphasise the critical role of open source tools and data in enabling transparency, collaboration, and innovation in the fight against modern slavery.

Inspire the global data community to leverage technological innovations for social good.

Celebrate and showcase the hackathon's success, highlighting innovative solutions developed by participants and recognising outstanding contributions.

Contribute to SDG8, Target 8.7: "Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms."

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Track Classification: SciDataCon Persistent Themes: Data Science and Data Analysis