TIME 2025: 1st International Workshop on Transformative Insights in Multi-faceted Evaluation

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Abstract

Our workshop brings together domain experts and research students to share insights, practical guidance, and evaluations on key topics, including social network analysis, graph algorithms, web mining, semantics and knowledge, security, privacy, fairness, and ethics on the web. We invite survey, evaluation, or review papers that critically analyze models and datasets from diverse perspectives. These papers serve as essential resources by (i) providing quick reference guides for researchers and practitioners, (ii) enhancing accessibility for newcomers, and (iii) distilling key insights into actionable knowledge. Complementing these contributions, invited talks from experts and industry leaders will offer practical perspectives, fostering cross-domain collaboration in web technologies. Through thought-provoking discussions and networking opportunities, the workshop bridges research and real-world applications, setting a new standard for interdisciplinary exchange in the field.

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CCS Concepts

• **General and reference** → **Surveys and overviews**; • **Information systems** → *Web applications*; • **Security and privacy** → *Human and societal aspects of security and privacy*; • **Computing methodologies** → **Artificial intelligence**; **Machine learning**; • **Applied computing**;

Keywords

Insights, Practical guidance, Evaluation, Survey, Review, Actionable knowledge, Cross-domain

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1 Introduction

Our workshop, The First International Workshop on Transformative Insights in Multi-faceted Evaluation (TIME 2025), held at The Web Conference (WWW 2025), addresses the growing need for cross-domain knowledge exchange in web technologies, an area rapidly evolving to meet the demands of an interconnected and data-driven world. It focuses on key topics such as social network analysis, graph algorithms, web content analysis, and semantics, alongside critical issues like security, privacy, fairness, and ethics.

In today's digital landscape, where privacy breaches, misinformation, and algorithmic biases pose significant challenges, TIME 2025 fosters interdisciplinary collaboration to apply successful techniques across domains. By bridging academia and industry, the workshop aims to translate research insights into real-world applications, equipping participants with actionable solutions to navigate the complexities of modern web technologies.

The relevance of this workshop has never been greater, as web technologies increasingly shape diverse sectors such as social media, healthcare, and e-commerce, each facing unique yet interconnected challenges. For instance, privacy practices in healthcare can inform data security strategies in social networks [3, 10, 11], while fairness in social media content moderation can inspire transparency standards for e-commerce algorithms [9]. The workshop's collaborative structure provides a timely response to these challenges, bringing together researchers, practitioners, and domain experts to develop practical guidance [2, 4], conduct comprehensive evaluations [1, 5–8], and advance cutting-edge methodologies. This approach not only fosters the development of robust and responsible web technologies but also builds an accessible knowledge base that aligns with WWW's mission of promoting ethical, transparent, and secure web principles. We invite submissions on a wide range of topics, including but not limited to the following areas:

i. **Survey nature.** Authors are encouraged to provide comprehensive overviews of specific fields, summarizing state-of-the-art approaches, frameworks, and findings. These surveys are crucial for identifying trends and knowledge gaps that can inform future research directions. For example:
   - Video processing techniques: A review of current methodologies, highlighting advancements in compression, enhancement, and analysis across various applications.
   - Data-centric video analytics: An exploration of data-driven approaches in video content analysis, with an emphasis on machine learning applications.

ii. **Evaluation focus.** We invite critical evaluations of existing solutions and their implications, fostering nuanced analyses of strengths and weaknesses. Relevant topics include:
   - Ethical and trustworthy AI for healthcare: An examination of frameworks ensuring transparency and accountability in healthcare AI systems.
   - Security and privacy in clinical AI: A review of security measures and privacy protections in clinical AI applications.
   - Video content moderation: An evaluation of the effectiveness of current methods for moderating video content on social media, focusing on accuracy and ethical implications.

iii. **Review of methodologies.** We welcome critiques of various methodologies, exploring opportunities for improvement or adaptation. Suggested topics include:
   - Data standards and annotation for AI/ML: A review of best practices and standards for data annotation and their implications for model performance.
   - Robust and interpretable Large Language Models (LLMs) for healthcare: An analysis of advancements in LLMs, focusing on interpretability and reliability.
   - Video analysis for social media content: An exploration of algorithms for detecting and analyzing motion in videos shared on social media, examining implications for content moderation and audience engagement.

iv. **Cross-disciplinary insights.** We encourage interdisciplinary discussions that broaden evaluation scope and promote diverse perspectives. Potential topics include:
   - Smart city applications: How web technologies enhance urban living and governance through AI-driven solutions.
   - Combatting online extremism: Strategies for detecting and reducing harassment and hate speech.
   - Human-centric video analytics: Implications of analyzing human motion in videos, with applications in health, security, and social behavior.

v. **Addressing emerging challenges.** We aim to tackle current issues, prompting evaluations of existing strategies and proposing recommendations for future research. Areas of interest:
   - Misinformation and disinformation in crisis situations: Evaluating the impact of misinformation during crises and current strategies to combat it.
   - Quality, uncertainty, and trust in discourse data: A critical examination of reliability and provenance in discourse data, addressing quality and trust implications.
   - Challenges in video quality assessment: A review of methodologies for assessing video quality and their implications for user trust and content engagement.

2 A Good Match for WWW 2025

TIME 2025 is a natural fit for WWW 2025, aligning perfectly with its mission to advance interdisciplinary research and foster impactful innovation in web technologies. WWW is known for tackling the technical and societal impacts of the web, and this workshop directly addresses that dual focus by concentrating on cross-domain knowledge exchange, ethical considerations, and practical applications of research findings. By assembling experts from diverse areas, social network analysis, graph algorithms, web content analysis, security, privacy, fairness, and ethics, the workshop embodies WWW's commitment to advancing the web in ways that are both groundbreaking and responsibly aligned with society's needs.

In addition, this workshop's goal of bridging the divide between academic research and industry demands speaks directly to WWW's emphasis on real-world relevance and applicability. Today's web technology landscape faces mounting challenges, such as misinformation, privacy violations, and biases in algorithmic decision-making, which require solutions that are not only innovative but adaptable across fields. This workshop promotes precisely this kind of adaptability and cross-pollination by inviting participants to explore how successful strategies in one area, such as privacy practices in healthcare or fairness standards in social media moderation, can inform solutions in other domains. By facilitating this type of interdisciplinary exchange, the workshop aligns with WWW's aim to foster practical, impactful contributions that address the complex, interconnected nature of today's web.

The workshop's structure further enhances its relevance to WWW by combining comprehensive evaluations, practical guidance, and concise survey papers, which together make it accessible and engaging for the conference's diverse audience. This inclusive format encourages participation from both seasoned experts and newcomers, ensuring that the insights shared will reach and benefit a broad community of researchers, practitioners, and policymakers. In line with WWW's mission, this approach not only supports the development of innovative web technologies but also cultivates a responsible knowledge base that prioritizes ethical, transparent, and secure principles, qualities that are foundational to the web's future. The workshop, therefore, promises to provide WWW attendees with actionable insights and methodologies that will enhance the impact and relevance of their work across multiple fields.

3 Inaugural Workshop Details

As a new initiative, we are excited to establish a platform for cross-domain knowledge exchange in web technologies. To distinguish this inaugural edition, we emphasize collaboration across diverse disciplines by inviting experts from academia, industry, and other professional domains. The workshop focuses on integrating innovative evaluation methods with both current and emerging web technologies, ensuring that discussions are relevant and impactful. Additionally, we introduce two Best Paper Awards to recognize outstanding contributions and inspire high-quality research.

As an emerging workshop, we uphold high standards in paper reviews. Each submission is assigned at least three reviewers, with most receiving four or five reviews. Notably, every paper has at least one reviewer from industry or a professional background. The Area Chair carefully evaluates all aspects of the reviews, including confidence levels and evaluation criteria, before making recommendations. The Program Chairs conduct a rigorous assessment of each submission, considering the reviews, author responses, and Area Chair recommendations before making final decisions. Ultimately, six papers were accepted for oral presentations, and five for poster presentations.

We, the TIME 2025 organizers, sincerely thank all reviewers, Area Chair Ashutosh Ahuja (Principal Researcher at Starbucks), and our workshop coordinators (Arjun Raj, Qixiang Chen, Xiuyuan Yuan, and Xi Ding) for their dedication and hard work.

4 Short Bio of Organizers

The organizing team is equally diverse, comprising individuals from multiple institutions, regions, and professional paths. This team includes members from academia, industry, and non-profit organizations, ensuring a wide array of expertise and perspectives. By harnessing this diversity, we not only strengthen the workshop's relevance but also foster an inclusive environment that encourages participation from all attendees. Our commitment to diversity will be a cornerstone of the workshop, promoting equitable opportunities for knowledge exchange and collaboration among participants from various backgrounds.

Dr. Lei Wang: A Research Fellow at Griffith University (formerly a Research Fellow at ANU). Dr. Wang specializes in AI-driven multimedia analysis and transformative evaluation techniques. He was recently recognized as an Outstanding Area Chair at ACM Multimedia 2024 and has extensive experience in organizing multidisciplinary workshops in multimedia and AI.

Dr. Md Zakir Hossain: A Senior Research Fellow at Curtin University, Dr. Hossain's research focuses on applied machine learning, computer vision, and data analytics. He has a history of organizing academic workshops and conferences, particularly those that bridge the gap between academia and industry. He is a pulication chair for DICTA2024.

Dr. Syed Islam: A Senior Lecturer at ECU, Dr. Islam has expertise in data science, machine learning, and bioinformatics. He has organized workshops and research meetings that focus on applying data-driven approaches to solve complex problems in various domains, including healthcare and bioinformatics. His interdisciplinary background and experience make him a valuable contributor to academic events that foster collaboration across fields.

Prof. Tom Gedeon: A Professor at Curtin University, Prof. Gedeon is a leading expert in human-centered AI and neural networks. He has a longstanding background in organizing prestigious conferences and has contributed significantly to research events that promote interdisciplinary knowledge exchange.

Dr. Sharifa Alghowinem: A Research Scientist at MIT Media Lab, Dr. Alghowinem focuses on affective computing and human-computer interaction. Her experience includes organizing multiple workshops on the applications of AI in human behavior, bringing together insights from both technology and psychology.

Ms. Isabella Yu: A researcher at MIT, Ms. Yu specializes in data science and AI ethics. She has contributed to several academic meetings on responsible AI, helping bridge academic discussions with policy and societal implications.

Ms. Serena Bono: A member of the MIT Media Lab, Ms. Bono works in human-centered AI, with a focus on social impact. She has organized community outreach events and workshops that explore the role of AI in social and environmental issues.
Dr. Xuanying Zhu: A Research Scientist at Seeing Machines and an Honorary Lecturer with the ANU School of Cybernetics. She specializes in computer vision and machine learning, with a focus on driver monitoring and safety. Dr. Zhu has experience organizing research meetings that bridge academic and industry perspectives on applied AI and human-centered technology.
Ms. Gennie Nguyen: A student researcher at ANU and TIME Lab, Ms. Nguyen's work focuses on machine learning applications in environmental sustainability. She has been part of various interdisciplinary projects and workshops aimed at combining technology with environmental science.
Dr. Nur Al Hasan Haldar: A researcher at Curtin University, Dr. Haldar specializes in natural language processing and health informatics. He has been involved in organizing workshops that emphasize the integration of AI in healthcare, fostering discussions among experts from various fields.
Dr. Seyed Jalali: Working with the Australian Energy Market Operator (AEMO), Dr. Jalali has expertise in energy systems and sustainable technology. He has organized research meetings that connect technology and policy-making to address energy challenges.
Prof. Md Abdur Razzaque: A Professor at the University of Dhaka, Prof. Razzaque's research covers IoT and smart cities. He has a history of organizing international workshops and conferences on innovative technologies for urban development, with a focus on interdisciplinary collaboration.
Dr. Imran Razzak: A Senior Lecturer at the University of New South Wales, Dr. Razzak's research includes AI in healthcare and bioinformatics. He has experience in organizing workshops and research meetings that bring together researchers from computer science and medicine to foster interdisciplinary research.
Prof. Md Rafiqul Islam: An Associate Professor at Charles Sturt University, Dr. Islam specializes in cybersecurity, network security, and privacy. He has extensive experience in organizing workshops and research meetings, particularly in cybersecurity and digital forensics. Dr. Islam has served on program committees for several international conferences and has a strong track record in fostering cross-disciplinary collaborations, making him well-suited to lead and contribute to impactful academic events.
Dr. Shahadat Uddin: A Senior Lecture at The University of Sydney, Dr. Uddin specializes in social network analysis, health informatics, and complex systems modeling. He has a strong background in organizing interdisciplinary workshops and research meetings that connect researchers from fields like healthcare, data science, and network analysis. His work in facilitating knowledge exchange across disciplines has made a significant impact, particularly in areas related to healthcare analytics and social networks.
Dr. Naeem Janjua: A Senior Lecturer at Flinders University, Dr. Janjua focuses on artificial intelligence, and big data analytics. He has experience organizing and contributing to workshops and conferences that emphasize data science applications in real-world scenarios. Dr. Janjua's involvement in academic events highlights his commitment to bridging theory and practice, especially in areas where AI and data analytics intersect with industry needs.
Assoc. Prof. Aneesh Krishna: An Associate Professor at Curtin University, Dr. Krishna specializes in software engineering, AI, and complex systems. He organized workshops and research meetings focused on advancing AI and software development practices, fostering collaboration between academia and industry.
Dr. Manzur Ashraf: A casual lecturer at La Trobe University and Federation University in Melbourne. He holds a Ph.D. in IT from the University of South Australia and a bachelor's from BUET. With expertise in SEO, web technologies, and software development, he brings practical insights into cross-domain applications in AI and multimedia.

5 Invited Speakers

We aim to invite a diverse group of speakers who represent different genders, nationalities, and professional backgrounds. Our selection includes individuals from leading academic institutions, industry experts, and practitioners who bring unique insights into web technologies. By ensuring representation from underrepresented groups, we hope to create a platform that reflects a variety of experiences and viewpoints, enhancing the overall depth of the workshop. We are pleased to welcome the following invited speakers:

i. Assoc. Prof. Wei Liu, University of Western Australia, Australia
ii. Dr. Fateme Fahiman (Manager Data Science, Australia Excellence Award Finalist 2020, Top 25 Analytics Leader 2022), Australian Energy Market Operator (AEMO), Australia
iii. Prof. Tanzila Saba, Prince Sultan University, Saudi Arabia
iv. Assoc. Prof. Mohammad Abdur Razzaque, Teesside University, United Kingdom

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