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Theme: AI, Security, Privacy in a Digital World

BOOKLET OF ABSTRACTS

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ABSTRACTS OF KEYNOTES

Keynote 1: Cybersecurity and AI: Critical workforce needs and resources

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Keynote 2: Preparing Students for the Human Jobs

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ABSTRACTS OF WORKSHOPS AND PANEL

Workshop 1: Human Values in Technology

Objective: This workshop aims to provide participants with an understanding of the challenges involved in embedding human values into technology by introducing these in a community-engaged learning approach currently piloted in Southern European regions.

By the end of the session, participants will:

- *Grasp the concept of human values and their origins in human history.*
- *Understand the significance of seven specific values: dignity, justice, fairness, transparency, efficiency, trust, and accountability.*
- *Learn about the philosophical idea of eudaimonia and its relevance to modern technology and leadership.*
- *Connect human values to broader European values and Sustainable Development Goals (SDGs).*
- *Understand the importance of these values in public sector and media industries.*

Facilitator: Nerko Hadziarapovic

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Workshop 2: Enhancing Student Support with AI: Best Practices for Accessibility Services and Tutoring

This interactive workshop will explore how artificial intelligence can be responsibly integrated into student services to advance equity and academic success. Designed for higher education professionals, the session will showcase practical tools and strategies for using AI to personalize tutoring, improve access for students with disabilities, and streamline support services. Participants will gain insights into ethical considerations, inclusive design, and real-world applications that enhance learning while maintaining student trust and data integrity. Case studies and hands-on demonstrations will offer concrete takeaways to implement on campus.

For the best experience, participants are encouraged to have ChatGPT loaded on their device and to bring a digital version of an assignment or article they commonly use with students

Facilitators: Alison Munsch

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Workshop 3: Why are there so many musicians in IT?

Ever noticed how many tech professionals have a musical background? Why?

Facilitators: Peter Munsch

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Panel Discussion: Impactful Research

How do you tell your story? How do you obtain research funding?

Lessons for Deans and Department Heads of Things to Do, or Not

Moderator: Tanya Goette tanya.goette@gcsu.edu

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ABSTRACTS PER SESSION

SESSION 1: STRATEGIC AND SUSTAINABLE TECHNOLOGY MANAGEMENT

Balancing Innovation and Impact: Exploring the Environmental Footprint of Generative AI and Ecologically Sustainable Strategies for Decision Makers and Influencers

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Abstract

This research examines the intersection of generative AI systems with environmental sustainability, focusing on how decision-makers in technology, data center management, and policy domains are addressing the ecological impacts of AI. The study employs a mixed-methods approach that combines lifecycle assessments (LCAs), survey research, expert interviews, and scenario modeling. Key components of the research include a secondary research analysis of AI energy consumption and emissions in data centers, utilizing published model data and sustainability disclosures. It will also include semi-structured interviews with AI developers, data center managers, sustainability officers, and policymakers to gain in-depth insights into trade-offs, barriers, and strategies, which will inform the development of the survey. Scenario modeling will be utilized to forecast the long-term environmental trajectories of AI under varying policy and infrastructure assumptions. The findings will inform recommendations for technology governance, regulatory development, and environmental policy, offering actionable strategies to support sustainable AI innovation.

Sustainable Enterprise Architecture: Embedding Circular Economy and Lifecycle Thinking in IT Strategy

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Abstract

This paper explores the integration of sustainability into traditional Enterprise Architecture (EA), proposing a novel Sustainable Enterprise Architecture (SEA) model, and uses the fashion industry to illustrate the efficacy of the proposed model. The SEA framework systematically embeds environmental, social, and economic sustainability principles into corporate strategy and operational practices. This research also addresses the significant intention-action gaps among both consumers and organizations in sustainability practice. Through vivid case examples, such as MUD Jeans' leasing model and Pact's affordable circular apparel, this research highlights practical pathways for operationalizing sustainability. By leveraging Circular Economy (CE) and Product Life Cycle (PLC) concepts, SEA fosters collaborative stakeholder engagement, promoting substantial advancements in sustainable practices within the fashion industry.

Modern (Networked) Warfare: Its Concepts, Evolution, and Issues

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Abstract

The ongoing Russo-Ukraine war, the recent India-Pakistan war, and the Israel-US attacks on Iran have become interesting for a variety of reasons and garnered a lot of attention in international defense publications and weapons manufacturers. To many defense analysts and defense industry professionals, these wars have become real-life testing platforms to examine and evaluate various present-day war technologies. They have opened up discussion on the future of war, the increasing use of interconnected networks in warfare, and the increasing use of remotely operated drones in conducting surveillance and in offensive actions against enemies. Satellite communication and visualization, the use of computer networks, and electronic jamming devices are increasingly becoming akin to munitions. It will be interesting to analyze the nature of present-day warfare by using an information systems and/or socio-technical systems perspective. It would be revealing to determine aspects of “networked-warfare.” Several questions come to mind, such as: What are the frameworks used? What are its components? How is the tracking and networking of very fast-moving projectiles accomplished? How are troop movements planned during combat? What is the typical network medium? What is the role of satellite communications in this type of warfare? What are some of the technical obstacles, such as latency and interoperability, and how are these overcome? What is the role of AI and ML, if any, in modern weapons systems? There are also ancillary questions, such as: What are the ethical and social implications of new technologies such as drones? What is the role of disinformation and misinformation that are increasingly used in modern warfare? This research is an attempt to answer some if not all of these questions.

Exploring AI Corporate Governance through the Lens of Dynamic Capabilities

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Abstract

As AI technologies evolve, organizations must continuously adapt their governance structures to address emerging challenges related to transparency, ethics, and regulatory compliance. Given the rapid pace of AI advancements, traditional governance approaches may not be sufficient to ensure responsible AI oversight while maintaining competitiveness. This research examines AI corporate governance through the lens of Dynamic Capability (DC) Theory, focusing on how organizations can develop the capacity to sense technological and regulatory shifts, seize opportunities, and reconfigure governance mechanisms to align with AI-driven transformation. Through a literature review and the development of an AI Corporate Governance Framework grounded in DC Theory, this study explores how dynamic capabilities influence governance adaptability in the context of AI.

SESSION 2: HEALTHCARE INFORMATION SYSTEMS AND SUPPLY CHAINS

Does Health Information Exchange Matter? Moderating Effects of Hospital Size, Location, and Ownership Type

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Abstract

This article examined the moderating effects of hospital size, location, and ownership type on the impacts of Health Information Exchange (HIE) on hospital efficiency. A main research question was whether participating in the HIE increases hospital efficiency. Additionally, this paper examined whether hospital size, location, and ownership type exhibit any differences. This study collected sample data from the 2017 American Hospital Association (AHA) U.S. Hospital Annual Survey dataset and the 2017 AHA IT Survey dataset. This research developed Data Envelopment Analysis models to measure technical efficiency scores of the hospitals. The number of beds, the number of Full-Time Equivalent Doctors, the number of Full-Time Equivalent Registered Nurses, and Total Operating Expenses were selected as inputs for the DEA models. Total Inpatient Days, Total Outpatient Visits, and Total Patient Revenue were selected as the outputs for the DEA models. Tobit Regression Analysis and Mann-Whitney Test were performed to test the hypothesis. The results show that the data supported the main hypothesis. A group of hospitals participating in the HIE was statistically significantly more efficient than the non-participating hospital group. There were mixed results on the moderating effects.

Predicting Global Healthcare Supply Chain Delays: A Machine Learning Approach Leveraging Country-level Logistics Metrics

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Abstract

In global healthcare logistics, ensuring the timely delivery of medical commodities is critical, particularly in low- and middle-income countries characterized by infrastructural limitations and operational uncertainties. This research introduces an advanced, data-driven predictive framework designed to forecast delivery delays by synthesizing granular, internal shipment-level data from the USAID Global Health Supply Chain Program (GHSC-PSM) with external country-level logistics capabilities indicators derived from the World Bank's Logistics Performance Index (LPI). Rather than relying on retrospective trend analyses, this study employs machine learning algorithms such as Random Forest, XGBoost, Support Vector Machines (SVM), and Multi-Layer Perceptron (MLP) to detect shipment delays proactively. A distinctive methodological innovation lies in explicitly integrating country logistics capabilities such as customs efficiency, infrastructure quality, and timeliness with internal shipment metadata, enabling a more comprehensive and precise prediction of delays. Empirical validation demonstrates that this integrative approach significantly enhances predictive performance, revealing systemic inefficiencies and enabling targeted managerial interventions. Consequently, logistics managers can leverage these insights to strategically optimize healthcare logistics and supply chains. This study contributes to a rigorously validated and scalable predictive tool, facilitating a strategic shift from reactive to anticipatory logistics management within global health supply chains.

Empirical Investigation on the Effect of Brain Drain “Japa Syndrome” On Agile Healthcare Information Systems Development in Nigeria

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Abstract

Within the software engineering context, agile approaches encourage customer collaboration, iterative development, and flexibility. However, the mass exodus of highly skilled professionals, known as the “brain drain” or “Japa Syndrome,” has emerged as a considerable challenge in Nigeria. This phenomenon has notably affected the healthcare Information Systems software development sector, where the loss of seasoned agile practitioners undermines project continuity, knowledge transfer, and team dynamics. This study empirically investigates the impact of brain drain “Japa Syndrome” on agile healthcare information systems development in Nigeria. This study employed a qualitative, multi-method approach to gather empirical data from 13 agile practitioners in healthcare information systems in Nigeria. The study employed semistructured, open-ended interview questions and utilised snowball sampling from our network of professional experts. The data collected were analysed using a data analysis approach derived from grounded theory, including open coding, constant comparison, memoing, and theoretical saturation. The study identified significant challenges that disrupt team dynamics, compromise software quality, and lead to security vulnerabilities, loss of expertise, weakened security, risk of non-compliance, and increased likelihood of cyber threats within the Nigerian healthcare context. We mapped the identified challenges into five mamos encompass the sudden loss of agile team members, an increase in technical debt, delays in decision-making, the psychological effects on the agile team, and organisational coping mechanisms. The contribution of this research is a detailed analysis of five memos on “brain drain” and “Japa Syndrome”, and their impact on agile software practices within the context of Nigerian healthcare information systems development. Without investment in secure coding, security leadership, and a privacy and security-by-design culture, Nigerian healthcare software firms risk data breaches and reputational harm. To address the impact of brain drain, known as “Japa Syndrome,” urgent systemic reforms are necessary for the viability and competitiveness of Nigeria's healthcare technology sector.

Adoption of Blockchain Technology in Beverage Supply Chains: Drivers, Benefits, and Challenges in the Coca-Cola and BODYARMOR Sport Water Recall Case

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Abstract

The beverage industry faces growing scrutiny as demands for transparency and accountability intensify. In today's digital landscape, companies must prioritize enhanced traceability to ensure product safety, comply with regulations, maintain consumer trust, and safeguard brand reputation. This research investigates blockchain technology as a potential solution to these challenges, emphasizing its capacity to decentralize data, improve traceability, and accelerate response times during safety recalls. The study traces the evolution of food safety regulations and analyzes current traceability practices and technological innovations within the beverage sector. Using the Coca-Cola and BODYARMOR Sport Water recall as a case study, this study examines drivers, benefits, and challenges of the adoption of blockchain in beverage supply chains. Key findings highlight the importance of integrating blockchain with legacy systems, ensuring accurate data input, and addressing concerns around scalability and privacy. This research bridges academic theory and industry application, offering practical strategies for strengthening supply chain integrity through blockchain adoption in the beverage industry. Several promising future research directions related to the adoption of blockchain in the food and beverage industry are also suggested.

SESSION 3: AI AND HUMAN COMMUNICATIONS

Does Health Information Exchange Matter? Moderating Effects of Hospital Size, Location, and Ownership Type

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Abstract

Detecting sarcasm in text remains a critical yet challenging task in natural language processing (NLP). Despite significant advances through deep learning, particularly the use of transformer-based architecture like BERT, sarcasm detection models still face challenges in achieving high accuracy. A major limitation lies in their insufficient incorporation of contextual awareness, including conversational history, social interactions, emotional cues, and cultural factors. To address this, this paper proposes the BERT with Meta-Feature Logistic Regression Fusion (BMLRF) model, which integrates sentence-level embeddings from a pre-trained transformer with meta-features capturing social, emotional, and cultural contexts. The model also leverages multi-turn dialogue history and social interaction embeddings to enhance contextual understanding. This fusion approach aims to improve sarcasm detection robustness across domains such as social media and political discourse, emphasizing the critical role of emotion, social dynamics, and cultural context in sarcastic communication.

Exploring Social media Video Message Authenticity in the Age of AI-supported CMC

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Abstract

The field of computer-mediated communication is predicated upon the understanding that in electronically-supported communication, the communication medium in use impacts communication processes and outcomes (Nunamaker et al., 1991). Decades of research have compared these impacts in many different settings and for many types of groups/partners. Generally, research has explored how the availability, lack, or manipulation of various communication cues impacts the way that communicants experience and respond to the communication environment as compared to a face-to-face alternative. In recent years, however, the advancement of generative artificial intelligence technology and its inclusion within communication platforms has altered the electronic communication experience in a fundamental way. The real potential for AI to be mediating communications in small or large ways has shifted sole focus away from electronic transmission of the communicants' cues to also include a focus on the communicants themselves. With every communication, recipients must not only evaluate the cues coming from their partners, but they also have to determine whether the communication is "real" or not. Thus, the concept of authenticity has begun to receive increased focus within the field of CMC. We might expect that the perceived authenticity of a message can have strong impacts on the recipient's attitude and behaviors. In a world where fake news, deep fakes, and false identities abound, it is worthwhile to get a deeper understanding of what makes a message appear more or less authentic and what the impact of that perceived authenticity might be.

Local Digital Twins for Area Development

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Abstract

In 2030, more than 80% of the Dutch population will live in urban areas. This rapid urbanization brings significant challenges, such as air pollution, a shortage of green spaces, heat stress, and other urgent issues that threaten our living environment, but it also offers opportunities: the chance to collaboratively create healthy cities that not only improve the well-being of today but also that of future generations. Healthy cities contribute directly to better physical and mental health and a higher quality of life. The question is: how do we build a future-proof, healthy living environment that simultaneously addresses the challenges of climate change and the energy transition, and how can we use Digital Twins (DTs) for this? For the municipality of Veenendaal, this situation is particularly relevant, as a significant increase in the number of residents is expected in the coming years, along with corresponding construction plans. This PD trajectory will investigate how local digital twins (LDTs) can be responsibly designed and deployed to tackle these challenges, so that decisions can be made based on multiple data sources and citizens' trust in the government is enhanced. The knowledge gap exists at the municipality of Veenendaal in terms of sharing data from multiple sources, whether LDTs can be used for that, how this could be done, and how we simultaneously improve the relationship between government and citizens. Additionally, there is a national knowledge gap, or rather a need for knowledge development concerning how to make DTs interoperable, whether standards will assist in that, and how we share them with one another, and probably most importantly, how do we share all knowledge and experiences so that not everyone has to 'reinvent the wheel.'

SESSION 4: AI ETHICS

Responsible AI: Applications and Ethical Considerations

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Abstract

This study explores the role of anthropomorphism in enhancing users' digital experiences within the context of human–robot interaction at the Dawn Avatar Robot Cafe in Tokyo. The café features OriHime avatar robots remotely operated by individuals with physical disabilities, offering a unique form of socially inclusive, telepresence-based service interaction. Using a mixed-methods approach, the study first applied qualitative content analysis to 37 user-generated reviews collected from TripAdvisor, identifying key themes related to emotional engagement, robot behavior, and social connection. These insights were then evaluated quantitatively using the Godspeed Questionnaire Series (GQS), which measures user perceptions across five dimensions: Anthropomorphism, Animacy, Likeability, Perceived Intelligence, and Perceived Safety. The results revealed that Perceived Safety received the highest average rating ($M = 4.65$), followed by Likeability ($M = 4.30$) and Perceived Intelligence ($M = 4.22$). While Anthropomorphism ($M = 4.19$) was also rated positively, Animacy ($M = 3.86$) received the lowest average score. These findings indicate that human-like design elements—especially those enabling emotional warmth, social intelligence, and trust—significantly enhance users' digital experiences. The study concludes that anthropomorphism not only enriches user interaction but also supports broader goals of accessibility, empathy, and inclusion in technology-enhanced environments.

Artificial Intelligence, Gen-AI and Agentic AI: An Analysis and Ethical Implications

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Abstract

Artificial Intelligence (AI) has evolved from a niche field of computer science into a transformative technological force shaping nearly every aspect of modern life. Initially designed to simulate human reasoning and problem-solving, AI has progressed from symbolic logic systems and expert-based algorithms to advanced neural architectures capable of perception, adaptation, and creativity. The 21st century has witnessed an unprecedented acceleration in AI's capabilities, particularly with the advent of Generative Artificial Intelligence (Gen-AI) and the emerging paradigm of Agentic AI. Together, these systems are redefining how knowledge is created, decisions are made, and automation is achieved across academic, industrial, and societal domains.

Emerging Trends in Research on Ethics of ChatGPT: A Bibliometric Analysis

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Abstract

The significance of this study is threefold. First, it seeks to address a set of clearly defined research questions through a bibliometric analysis that systematically reveals the current state of scholarly inquiry and identifies emerging trends within the field of ChatGPT ethics. By mapping patterns of publication, authorship, and thematic focus, the study offers a data-driven overview of how the field has evolved to date. Second, this research contributes to a more nuanced understanding of the existing body of literature by delineating what has already been extensively examined and what areas continue to receive scholarly attention. Such insights are essential for researchers, educators, and policymakers aiming to grasp the contours and priorities of the discourse surrounding the ethical implications of ChatGPT. Third, the study serves a strategic role in shaping future research agendas by identifying critical gaps and underexplored issues within the field. In doing so, it provides evidence-based recommendations that may inform the development of new theoretical frameworks, empirical studies, and interdisciplinary collaborations addressing the ethical, social, and policy-related dimensions of ChatGPT.

SESSION 5: AI IN EDUCATION AND WORKFORCE SKILLS

Evolution of Best Practices in Prompt Engineering for Generative AI in Business Statistics and Analytics Education

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Abstract

As generative AI tools such as ChatGPT increasingly find their way into business classrooms, particularly in courses involving statistics and analytics, educators face an urgent need to guide students in developing AI literacy. Prompt engineering is a central skill within this landscape: the ability to design clear, strategic prompts that lead to accurate, useful, and pedagogically aligned AI outputs. While popular guidance, such as the '10 ChatGPT Prompt Templates That Work,' offers practical ideas for general use, these models have yet to be tested, verified, and tailored for use in educational settings with specific learning goals and content rigor, especially in data-intensive disciplines like business analytics. This extended abstract outlines a mixed-methods research study designed to identify and measure best practices in prompt engineering within the context of undergraduate business statistics and analytics education. It seeks to answer the following research questions: 1. Which types of prompts yield the most accurate and pedagogically effective generative AI outputs in quantitative business tasks? 2. How do different prompt templates (e.g., expert role, step-by-step guide, compare & decide) influence student comprehension, engagement, and critical thinking? 3. What frameworks can educators adopt to evaluate and improve prompt quality over time? This extended abstract outlines the combination of the Delphi Method (Okoli & Pawlowski, 2004) with the Robert Yin's (2017) case study research approach to investigate and improve prompt engineering focusing on how prompts work in different contexts, why they may succeed or fail, and how best educators and students can interact with AI driven LLM's in real-world situations to extract meaningful answers.

Beyond the Classroom

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Abstract

The demand for cybersecurity talent appears to be constantly growing, but the statistics can be illusory. According to Wages and Employment Trends in ONET On-Line cybersecurity job openings are ranked as having a Bright Outlook, and on May 1 2025 Cyberseek listed 450,000 US job openings out of a workforce of 1.25 million. However, most entry-level cybersecurity jobs require several years of experience resulting in a mismatch between supply and demand. Despite a “hot job market”, recently minted cybersecurity college graduates without experience have a hard time securing their first “entry-level” because they don’t meet the minimum requirements. According to multiple hiring managers, “You have to be able to tell your story.” If an applicant cannot explicitly explain to the hiring manager the value they bring to an organization, they don’t get hired. Cybersecurity is a socio-technological team-oriented workplace, and competitive hires need to be able to articulate examples of experiences they have had while working in comparable environments. Students are not able to compete effectively for entry level jobs if they are only able to talk about what they have learned in class. Our interview-based research demonstrates how students can acquire relevant and requisite experiences through participating in cybersecurity competitions. Students who distinguish themselves by developing a track record outside of basic classroom activities earn more and have more employment choices upon graduation. To summarize our findings: what students do outside the classroom is as important as what they do in the classroom. Participating in competitions provides students with an opportunity to understand the relevance and purpose of what they need to learn in the classroom, and to market themselves more effectively in the job market.

Skill Evolution in the Age of AI-Utilizing Text Analytics for Skill Gap Analysis to Prepare Women for Leadership Roles

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Abstract

The rapid advancement of Artificial Intelligence (AI) is transforming the global workforce, presenting both opportunities and challenges for leadership development, particularly for women. As AI automates routine tasks and redefines skill requirements, there is a growing demand for uniquely human capabilities such as emotional intelligence, creativity, and strategic thinking, qualities that are inherently strong and often highly associated with women. Research indicates that women typically score higher in emotional intelligence, particularly in areas such as empathy and relationship management, which are critical for effective leadership (Goleman, 2020). Furthermore, studies by McKinsey & Company (2022) highlight that gender-diverse leadership teams, benefiting from women's creativity and strategic thinking, drive higher innovation and improved business performance. This alignment between women's natural strengths and the evolving needs of the AI-driven workplace presents a pivotal opportunity to bridge gender gaps in leadership roles. This shift offers a pivotal opportunity to bridge gender gaps in leadership roles by equipping women with the necessary skills to thrive in an AI-driven world. This study explores the Skill Evolution in the Age of AI, focusing on how targeted education, mentorship, and policy interventions can empower women for leadership positions. Utilizing text analytics techniques, the research employs topic modeling on training materials, leadership programs, and professional development content. The analysis aims to identify existing and emerging skill gaps, evaluate the effectiveness of current programs, and propose actionable strategies for inclusive leadership development. A key aspect of this research is examining how AI technologies can be leveraged to reduce the gender gap in leadership roles while addressing the biases in hiring and promotion processes, while also addressing the risks of perpetuating inequalities if gender considerations are overlooked. The findings highlight essential competencies that women need to lead effectively across various disciplines, especially in AI-integrated workplaces. Moreover, the study provides practical recommendations for organizations, educational institutions, and policymakers to create environments that support women's advancement into leadership roles. Ultimately, this research underscores the potential of AI as a catalyst for gender equity in leadership, advocating for systemic change that leads to more diverse, innovative, and resilient organizations in the digital era.

SESSION 6: CYBERSECURITY AND DEVSECOPS FRAMEWORK

Operationalizing DevSecOps in Highly Regulated Environments: A Participant Observation Action Research Study

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Abstract

This study builds upon a Constructivist Grounded Theory of DevSecOps to evaluate its practical implementation within a highly regulated environment (HRE). Employing Participant Observation Action Research (POAR), the researcher embedded within an organization undergoing a DevSecOps transformation to observe, intervene, and co-develop security-integrated practices over a 9-month period. The research aimed to assess the efficacy, adaptability, and sustainability of a previously developed conceptual model by examining how DevSecOps principles were enacted in context. Findings revealed that successful implementation hinged on five interdependent factors: real-time alignment of compliance with delivery pipelines, dynamic role reconfiguration, trust-based cross-functional communication, automation of security feedback loops, and the emotional labor of cultural change. The study identified moments of friction and breakthrough, offering empirical insight into the translation of theory into practice. This POAR study advances the field by demonstrating how DevSecOps can be instantiated within complex regulatory and operational constraints. It provides evidence-based guidance on overcoming cultural and procedural resistance, integrating security into continuous delivery, and building ethical, resilient systems at scale. The research contributes a contextualized validation of DevSecOps as both a socio-technical and regulatory construct, bridging the gap between conceptual theory and organizational application.

Reframing DevSecOps: A Constructive Grounded Theory Study of Security Integration in System Delivery

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Abstract

This study addresses the conceptual ambiguity surrounding DevSecOps by exploring how cybersecurity practitioners define, structure, and evolve security integration within software development and operations practices. Using Constructivist Grounded Theory Research (CGTR), we conducted in-depth interviews with experienced cybersecurity professionals operating in highly regulated environments. Through iterative coding and constant comparison, five interconnected and reinforcing theoretical categories emerged: Cultural Communication, Structural Integration, Technical Enablement, Transformational Momentum, and Human Resilience and Responsibility. Rather than conceptualizing DevSecOps as a maturity model or set of linear stages, the resulting theory characterizes it as a dynamic system of socio-technical interdependencies. These categories function as mutually reinforcing dynamics that collectively shape the adaptability, scalability, and ethical sustainability of DevSecOps initiatives. The theoretical model developed in this study reconceptualizes DevSecOps as a cultural-systemic transformation, emphasizing the invisible emotional labor and governance structures that underpin its implementation. This research contributes to the academic discourse by offering a practitioner-informed, theory-driven model of DevSecOps that foregrounds the human, organizational, and technical dimensions necessary for effective security integration. It holds implications for future empirical research, curriculum design, and the operationalization of DevSecOps in complex and regulated domains.

Scaling Down SAFe: Can the Scaled Agile Framework be Adopted by Small and Medium Enterprises? A Multiple Case Study

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Abstract

The Scaled Agile Framework (SAFe) has gained significant traction in recent years as a strategy to mitigate the risks associated with traditional front-end planning, which often results in downstream development challenges. The adoption of SAFe is not common for Small- and Medium Enterprises (SMEs), as its implementation is often perceived as complex, time-consuming and resource-intensive. However, the application of SAFe can add value for SMEs as well, when adapted and scaled down for use in those organisations. This qualitative multiple case study was undertaken to deepen our understanding of the applicability of the seven core competencies of SAFe in business software implementation projects at SMEs in The Netherlands, as well as detecting challenges they face when adopting this framework. Data, collected via document analysis and semi-structured interviews with key project stakeholders, was analysed using flexible pattern matching and thematic analysis. Cross-case analysis identified key themes and relationships related to project success and challenges. The results reveal that SAFe uniquely offers support in dealing with resistance, stakeholder-focused agility boosting bottom-up innovation, and a continuous learning culture enabling organisations making strategically aligned decisions faster. Resource limitations in SMEs require careful consideration for successful SAFe implementation.