

“Responsible AI in Agile: Conceptualizing Bias, Privacy, and Trust Challenges in Modern Software Delivery

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Abstract:

As Agile methodologies and large language model (LLM)–powered artificial intelligence (AI) converge, the promise of greater efficiency and adaptive delivery in software development grows. Yet, this technological marriage brings forth a nexus of risks—perpetuation of algorithmic bias, erosion of data privacy, and escalating trust deficits—that can undermine both organizational value and ethical imperatives. This concept paper, situated at the interface of AI governance and Agile practice, synthesizes recent literature and practical case observations, proposing a novel Agile-AI Ethics Integration Matrix to embed responsible AI into everyday Agile workflows. The paper closes with a research agenda calling for longitudinal studies and adaptive governance, aiming to foster sustainable, transparent, and trustworthy AI-augmented software delivery.