

DIGITALISATION OF MATERIALS INNOVATION

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We discuss the domain-specific characteristics of materials science that make our field simultaneously (1) ripe for digitalisation and (2) a challenging application area for domain-agnostic machine learning (ML). We describe approaches for and benefits of using materials-tailored ML in new materials development; requirements for underlying materials data infrastructure; and unique methodological considerations associated with applying ML to materials data. We conclude by highlighting several emerging areas of materials informatics research.