



IFPRI BRIEF TEMPLATE

Check One: Project Review Collaboration
 Workshop Other

Descriptive Title	Review on Application of Artificial Intelligence in the Field of Powder Technology
Working Title	AI Wonderland in Particle Technology
Technical Area	D, M
Date	13-June-2023
Short Description	This is a review of recent evolution in the field of AI and its potential application in the field of Powder Technology, specifically, in the field of characterization and modelling. The current understanding by the general powder technology community for applying AI is limited, hence this review would elucidate past and potential applications, and their limitations. This review could also act as – “A particle technologist’s guide to AI methods”. This review should be a collaborative work between authors with a mix of powder technology experience and data science to avoid bias in the review.
Objectives	Description of most common and successful AI approaches. For each approach provide: <ul style="list-style-type: none"> - What can and cannot be done? What type and amount of data is needed? What are the pitfalls of each approach? - Current state of the art on usage of AI in the field of powder technology, mainly focusing on characterization and modelling, but not strictly limited to these subjects. Identify areas in powder technology for each of the discussed AI methods in the field.
Scope	Powder Characterization – particle size and shape, flow, segregation, structure, etc. Modelling – DEM/CFD/BPB etc.
Out Scope	Wet systems and process control

Recommended Contractors (2 or 3)		
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