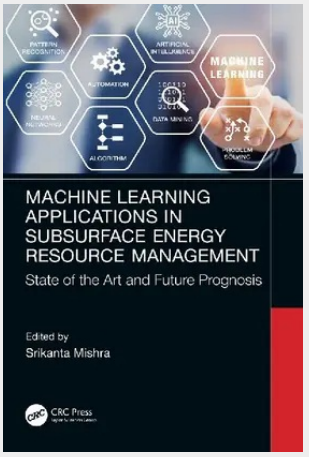
Mishra

Machine Learning Applications in Subsurface Energy Resource Management

State of the Art and Future Prognosis



The utilization of machine learning (ML) techniques to understand hidden patterns and build data-driven predictive models from complex multivariate datasets is rapidly increasing in many applied science and engineering disciplines, including geo-energy. Motivated by these developments, Machine Learning Applications in Subsurface Energy Resource Management presents a current snapshot of the state of the art and future outlook for ML applications to manage subsurface energy resources (e.g., oil and gas, geologic carbon sequestration, and geothermal energy). - Covers ML applications across multiple application domains (reservoir characterization, drilling, production, reservoir modeling, and predictive maintenance) - Offers a variety of perspectives from authors representing operating companies, universities, and research organizations - Provides an array of case studies illustrating the latest applications of several ML techniques - Includes a literature review and future outlook for each application domain This book is targeted at practicing petroleum engineers or geoscientists interested in developing a broad understanding of ML applications across several subsurface domains. It is also aimed as a supplementary reading for graduate-level courses and will also appeal to professionals and researchers working with hydrogeology and nuclear waste disposal.

The utilization of machine learning (ML) techniques to understand hidden patterns and build data-driven predictive models from complex multivariate datasets is rapidly increasing in many applied science and engineering disciplines, including geo-energy. Motivated by these developments, Machine Learning Applications in Subsurface Energy Resource Management presents a current snapshot of the state of the art and future outlook for ML applications to manage subsurface energy resources (e.g., oil and gas, geologic carbon sequestration, and geothermal energy). - Covers ML applications across multiple application domains (reservoir characterization, drilling, production, reservoir modeling, and predictive maintenance) - Offers a variety of perspectives from authors representing operating companies, universities, and research organizations - Provides an array of case studies illustrating the latest applications of several ML techniques - Includes a literature review and future outlook for each application domain This book is targeted at practicing petroleum engineers or geoscientists interested in developing a broad understanding of ML applications across several subsurface domains. It is also aimed as a supplementary reading for graduate-level courses and will also appeal to professionals and researchers working with hydrogeology and nuclear waste disposal.

194,50 €
194,50 € (zzgl. MwSt.)

Nicht mehr lieferbar

Artikelnummer: 9781032074528
Medium: Buch
ISBN: 978-1-032-07452-8
Verlag: Taylor & Francis Ltd (Sales)
Erscheinungstermin: 27.12.2022
Sprache(n): Englisch
Auflage: 1. Auflage 2022
Produktform: Gebunden
Gewicht: 676 g
Seiten: 378
Format (B x H): 152 x 229 mm