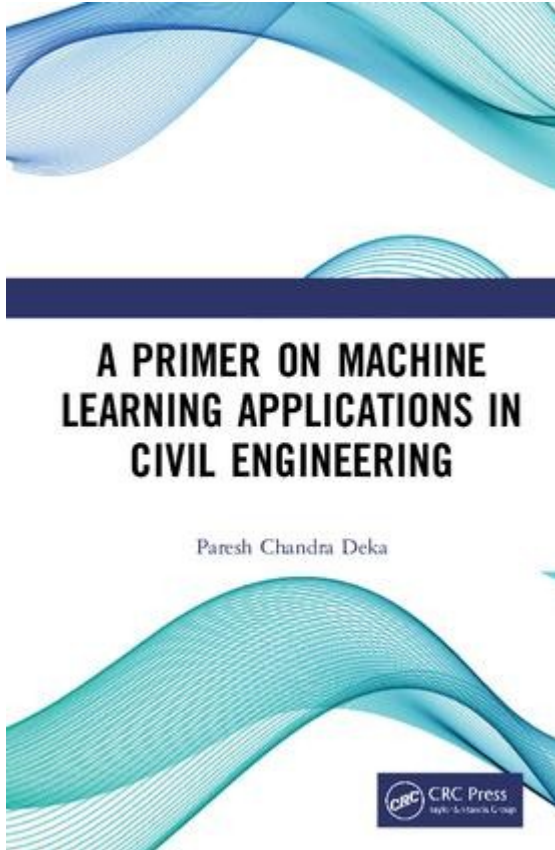-

A Primer on Machine Learning Applications in Civil Engineering
ByParesh Chandra Deka
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Machine learning has undergone rapid growth in diversification and practicality, and the repertoire of techniques has evolved and expanded. The aim of this book is to provide a broad overview of the available machine-learning techniques that can be utilized for solving civil engineering problems. The fundamentals of both theoretical and practical aspects are discussed in the domains of water resources/hydrological modeling, geotechnical engineering, construction engineering and management, and coastal/marine engineering. Complex civil engineering problems such as drought forecasting, river flow forecasting,

modeling evaporation, estimation of dew point temperature, modeling compressive strength of concrete, ground water level forecasting, and significant wave height forecasting are also included.

Features

- Exclusive information on machine learning and data analytics applications with respect to civil engineering

- Includes many machine learning techniques in numerous civil engineering disciplines

- Provides ideas on how and where to apply machine learning techniques for problem solving

- Covers water resources and hydrological modeling, geotechnical engineering, construction engineering and management, coastal and marine engineering, and geographical information systems

- Includes MATLAB® exercises

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3. Fuzzy Logic

4. Support Vector Machine

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