Mathematics for machine learning

Type de contenu : Texte

Type de médiation : sans médiation

Titre(s) : Mathematics for machine learning / Marc Peter Deisenroth,... A. Aldo Faisal,... Cheng Soon Ong,...

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Publication : Cambridge, UK New York, NY : Cambridge University Press

Date de copyright : C 2020

Description matérielle : 1 vol. (XVII-371 p.) : ill. en noir et en coul., couv. ill. en coul. ; 26 cm

ISBN : 9781108470049
1108470041
9781108455145
110845514X

Autres classifications : uyqp
uyqm
pbt
tbj

Classification décimale Dewey : 006.31 23

Note sur les bibliographies et les index : Bibliogr. p. 357-366. Index

Résumé ou extrait : The fundamental mathematical tools needed to understand machine learning include linear algebra, analytic geometry, matrix decompositions, vector calculus, optimization, probability and statistics. These topics are traditionally taught in disparate courses, making it hard for data science or computer science students, or professionals, to efficiently learn the mathematics. This self-contained textbook bridges the gap between mathematical and machine learning texts, introducing the mathematical concepts with a minimum of prerequisites. It uses these concepts to derive four central machine learning methods: linear regression, principal component analysis, Gaussian mixture models and support vector machines. For students and others with a mathematical background, these derivations provide a starting point to machine learning texts. For those learning the mathematics for the first time, the methods help build intuition and practical experience with applying mathematical concepts. Every chapter includes

worked examples and exercises to test understanding. Programming tutorials are offered on the book's web site.

Sujet - Nom commun : Apprentissage automatique -- Mathématiques

Forme, genre ou caractéristiques physiques : Manuels d'enseignement supérieur