BrainAGE

By Franke, Katja

Book Condition: New. Publisher/Verlag: Südwestdeutscher Verlag für Hochschulschriften | A novel machine learning approach for identifying abnormal age-related brain changes | Based on the widespread but well-ordered brain tissue loss that occurs with healthy aging into senescence, this work presents a novel magnetic resonance imaging (MRI)-based biomarker, which identifies normal and abnormal aging-related brain atrophy. The novel BrainAGE approach is based on a database of structural MRI data, aggregating the complex, multidimensional aging patterns across the whole brain to one single value, i.e. the estimated brain age. Consequently, subtle deviations in normal brain atrophy can be directly quantified in terms of years by analyzing one standard MRI scan per subject. Various neuro-degenerative diseases especially Alzheimer s disease (AD) are widely linked to advanced brain aging. The BrainAGE approach is applied to identify advanced brain aging in subjects with mild cognitive impairment and AD, to predict conversion to AD, to relate individual BrainAGE scores with disease severity and prospective worsening of cognitive functions. Furthermore, BrainAGE identifies various risk factors of pathological brain aging that may precede the onset of clinical symptoms (e.g., diabetes mellitus type 2, metabolic syndrome). | Format: Paperback | Language/Sprache: english | 168 pp.

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Reviews

This book is definitely not straightforward to get started on studying but extremely exciting to read. It is really simplistic but shocks in the 50 percent of the ebook. Once you begin to read the book, it is extremely difficult to leave it before concluding.
-- Ally Reichel

This publication is amazing. It is definitely basic but shocks in the fifty percent of your publication. You wont feel monotony at anytime of your own time (that's what catalogues are for concerning if you question me).
-- Prof. Kirk Cruickshank DDS