

A new approach to teaching Data Structures and Algorithms

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Summary

Every Computer Science or Computer Engineering curriculum has at least one "Data Structures and Algorithms" course. This study asks the question "why?". A survey of current practice and the most popular textbooks in the field shows that this subject, as actually taught, does little to advance either students' theoretical knowledge or practical skills.

New design based approaches, that also focus, where appropriate, on a functional approach to programming and the use of functional languages, increase the pedagogical value of these courses and convert the subject into one of both practical and theoretical value.