

CSE 4502/5717 Big Data Analytics Fall 2022

Instructor: Sanguthevar Rajasekaran (RAJ, equivalently)

Office Hours: T Th 2 PM to 3:30 PM; ITEB 252
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Grading Policy:

CSE 4502: Three homeworks worth a total of 10 points; Three exams worth a total of 90 points.

CSE 5717: Four homeworks worth a total of 10 points; Four exams worth a total of 90 points.

We live in an era of big data. Every domain of science and engineering calls for the processing of voluminous datasets. This course provides a review of fundamental algorithms and techniques employed in big data analytics.

Topics to be covered include:

- Introduction to Algorithms (sequential, parallel and randomized)
- Out-of-core Algorithms
- Data Structures
- Rules Mining
- Clustering Algorithms
- Text Mining
- Data Reduction Techniques
- Applications (string algorithms, record linkage, motif search, k -locus association, k -mer counting, error correction, sequence assembly, etc.)