

BIG DATA AND THE CLOUD

UNIT I CLOUD AND BIG DATA OVERVIEW

Cloud Computing – Roots of Cloud Computing - Service models - Deployment models - Challenges and Opportunities with Big Data.

UNIT II CLOUD STORAGE SYSTEM

Classic systems- Cloud storage – In memory data storage - Google file system- Distributed storage system for structured data-Windows Azure storage- The case of RAM clouds- Resilient distributed data sets.

UNIT III CLOUD DATA BASE AND MINING

Cloud database - Relational storage - Data transfer - Large scale file system and Map reduce – Data Mining - Frequent item sets – Clustering - advertising on the web.

UNIT IV CLOUD PROVISIONING

Cluster sizing - resource allocation - cloud views - cloud storage with minimal trust - data markets in the cloud - availability in globally distributed storage system.

UNIT V SECURITY

Security: Data Protection, Security Models - Data Availability and consistency - Data sharing and Markets - Influential security and systems.

REFERENCES

1. John W. Ritting House and James F. Ransome, "Cloud Computing Implementation, Management and Security", CRC Press, Taylor & Francis Group, Boca Raton London New York, 2010.
2. Venkata Josyula, Malcolm Orr and Greg Page, "Cloud Computing-Automating the Virtualized Data Center", Cisco Press Pearson, 2012.
3. Anandha Rajaraman and Jeff Ullman, "Mining of Massive Data sets" Cambridge University Press, 2011.

ADDITIONAL WEB RESOURCES

http://www.cs.ucsb.edu/research/tech_reports/reports/2010-04.pdf

<http://www.cs.ucsb.edu/~sudipto/papers/socc10-das.pdf>