



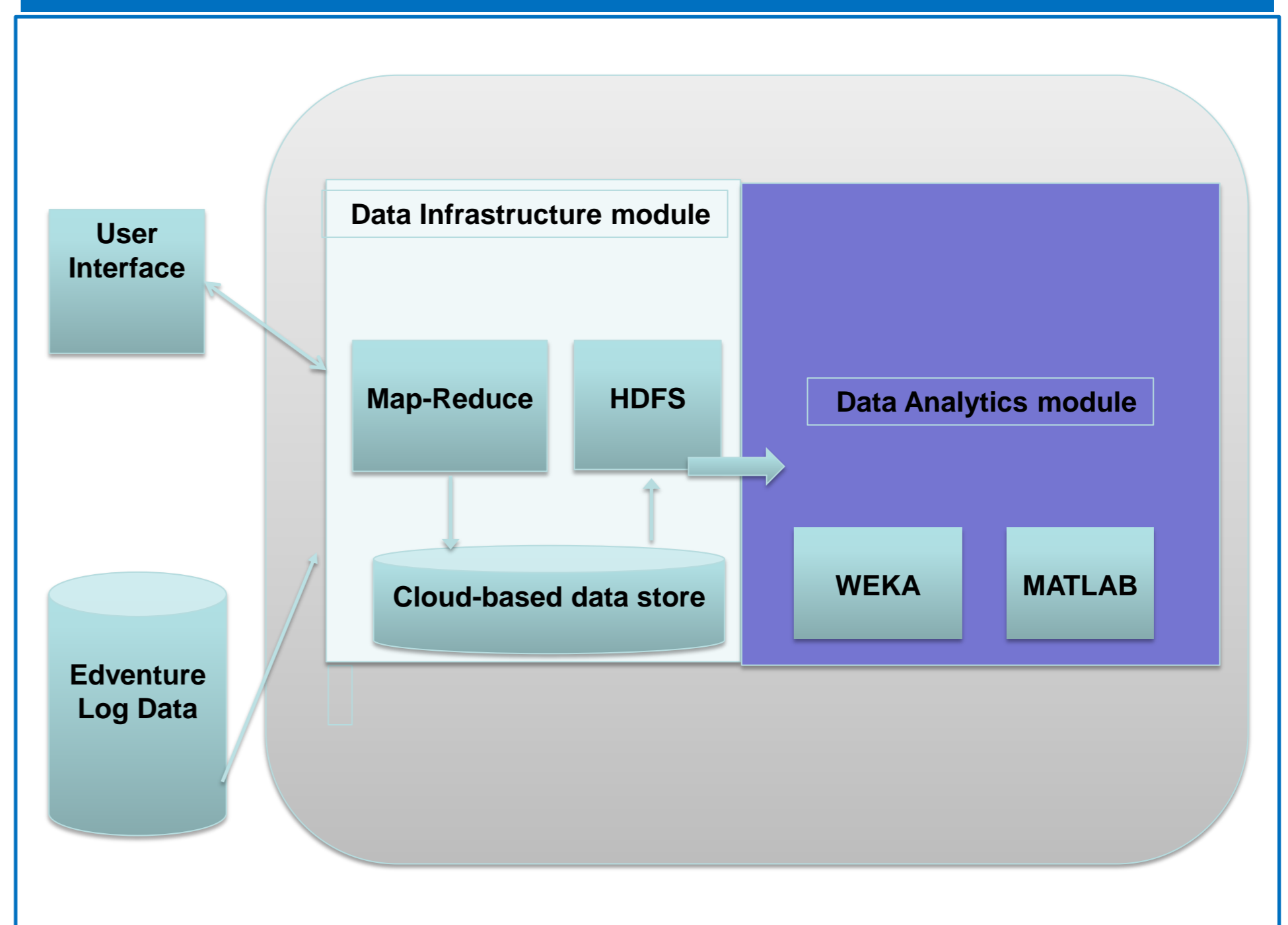
LARGE SCALE LOG DATA ANALYTICS THROUGH CLOUD: A CASE STUDY IN EDUCATION

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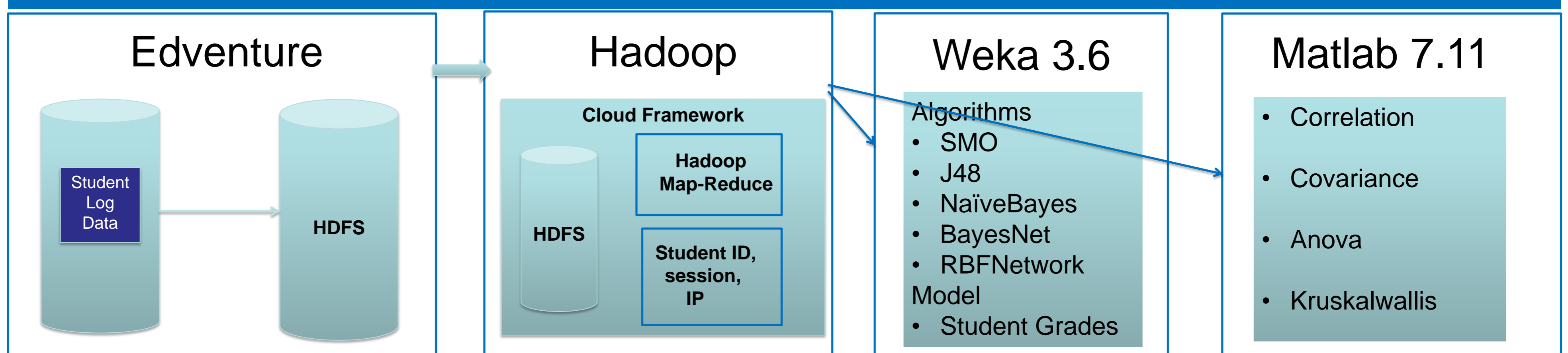
Motivation

E-learning systems are becoming the prototype of today's academic curriculum. Each student is assigned with a set of modules based on their preferences for each semester. Learning materials are posted and evaluated through the system. Computers keep logs of all students' activities (while they go through Presentation Slides, Video, and Lecture Notes etc.). Mining log data can give insights on how these modules are accessed by students in their order of preferences on each of these modules. The retrieved data is used in modelling student performance on each module.

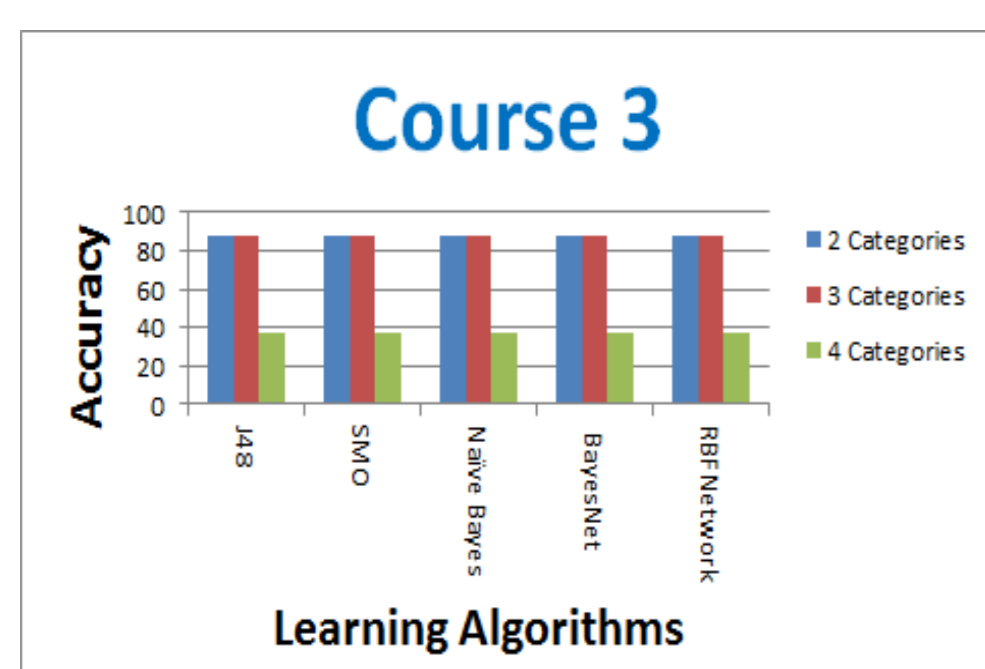
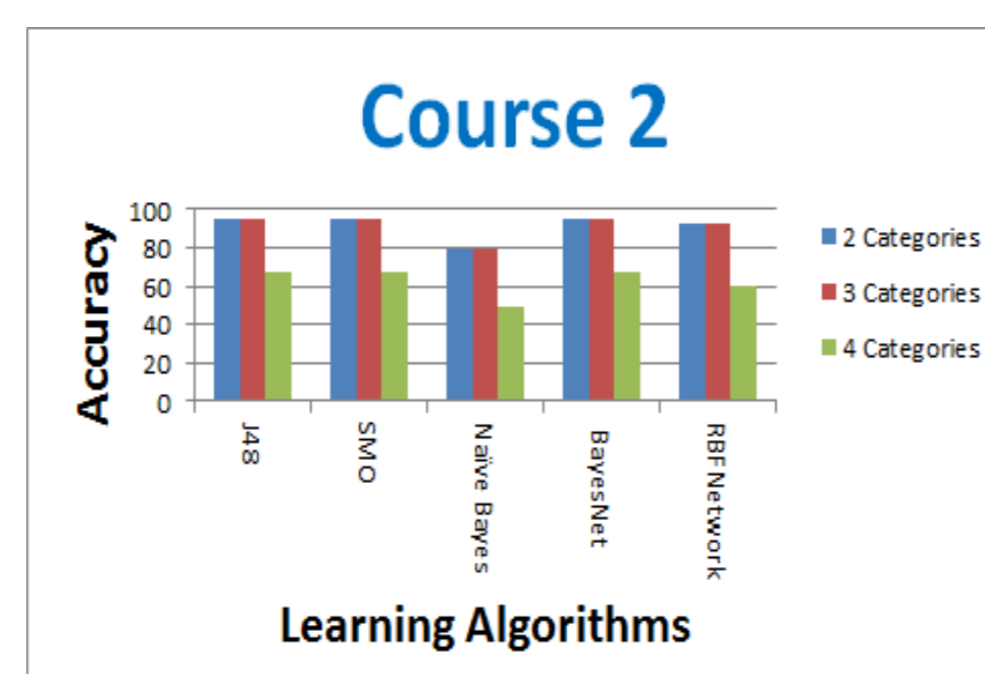
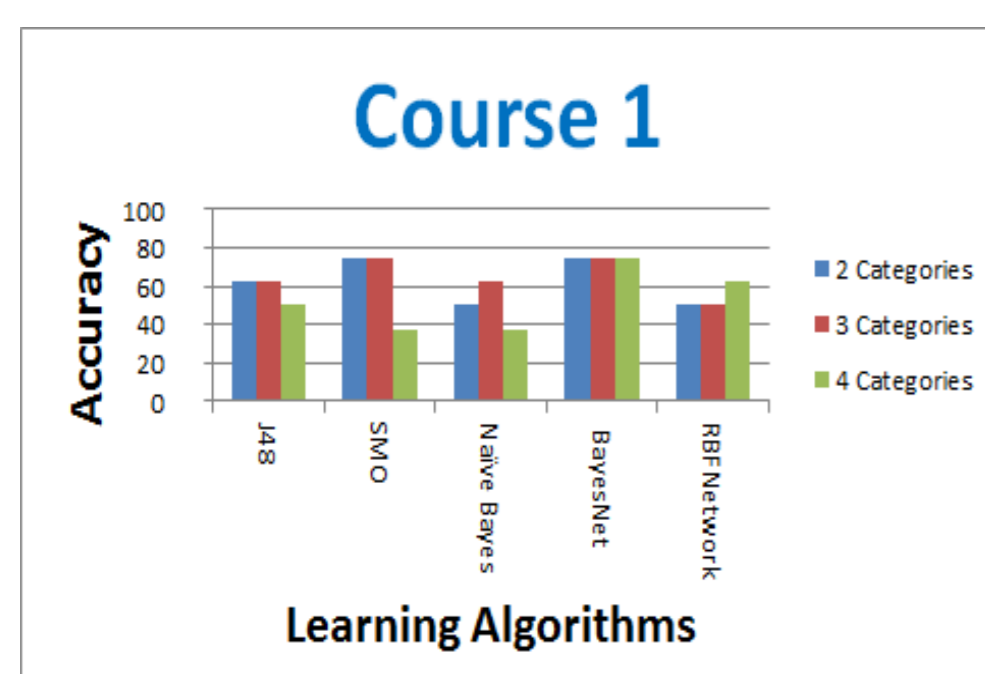
Architecture



Data Analytics Work Flow



Results & Conclusion



- Modeling of student grades (grouping on categories) on three CS courses with a semester Log data
- 24 data for Course 1
- 126 data for Course 2
- 23 data for Course 3

Conclusion

- Poorer performance in modeling with all grade categories
- Log data gives Insights {Grade, Courses}
- Hadoop Map-Reduce framework with 4 nodes executes three times faster

Future work

- Data-analytics through MATLAB
- Effective Course Management
- Decision on better e-learning study materials
- Handling heterogeneous data
- Effects on Group Learning