**DISCnet Big Data Engineering Course**

**December 13-15, 2017**

**Course Guide**

**VM location:** <https://s3-eu-west-1.amazonaws.com/bdec/BigDataCourseVM.ova>   
**VM Username/Password: big / big**

**Presentations**All the Presentations are available at: <https://freo.me/big-presentations>

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| --- | --- |
| Presentation | Description |
| 0 | Course Introduction |
| 1 | Big Data Overview and Motivation |
| 2 | Map Reduce |
| 3 | Apache Spark |
| 4 | Intro to SQL |
| 5 | Theory of Big Data Scalability |
| 6 | Additional Tools and Spark components |
| 7 | Introduction to Machine Learning |
| 8 | Data Visualization |
| 9 | NoSQL |
| 10 | Realtime Data Processing |
| 11 | Recap and Conclusions |

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**Exercise Guide  
  
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**All exercises are available at:**

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| Exercise | Description |
| 1 | Jupyter, Python and Pandas |
| 2 | Apache Spark and Wordcount |
| 3 | Simple SQL in Spark |
| 4 | Apache Spark on EC2, Flintrock |
| 5 | An undirected Spark problem |
| 6 | Joining datasets and finding correlation |
| 7 | Simple machine learning - clustering with k-means |
| 8 | NoSQL basics - importing data into Cassandra with Spark |
| 9 | Realtime data processing with Siddhi |