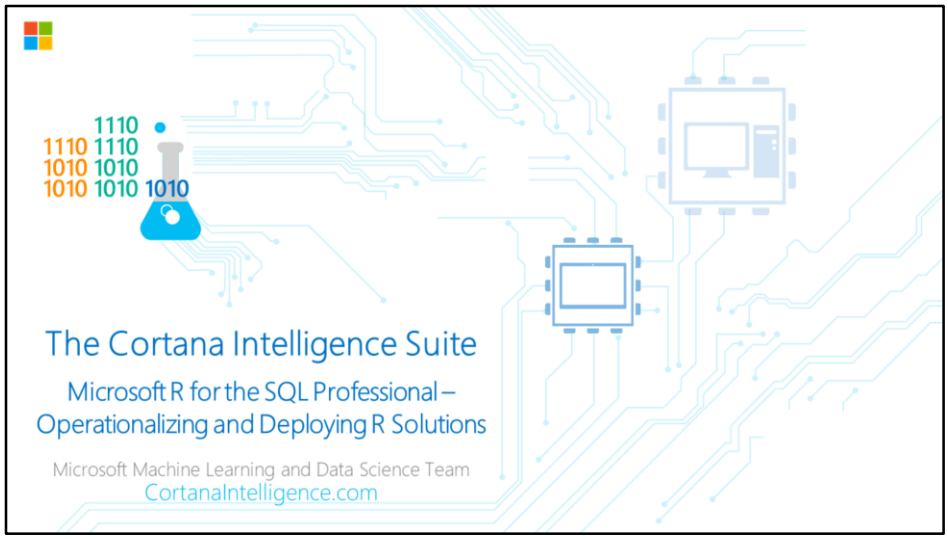
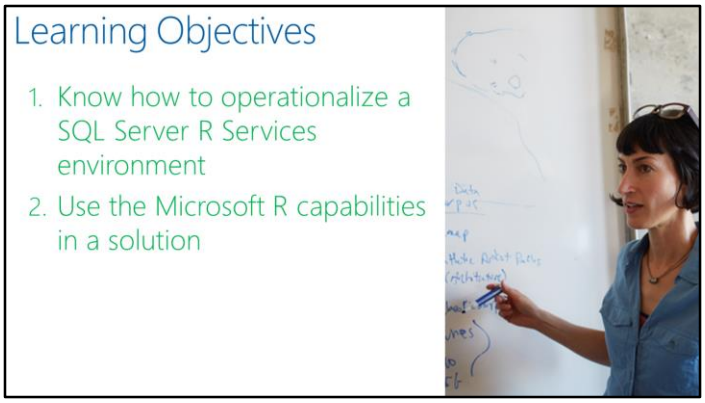


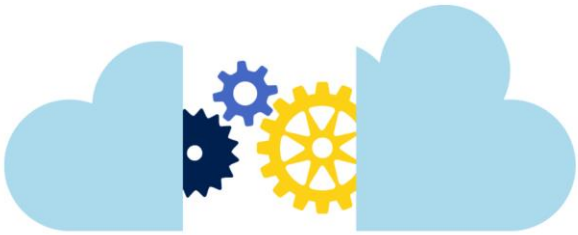
1. Main page: http://cortanaanalytics.com
2. To begin this module, you should have:
    1. Basic Math and Stats skills
    2. Business and Domain Awareness
    3. General Computing Background

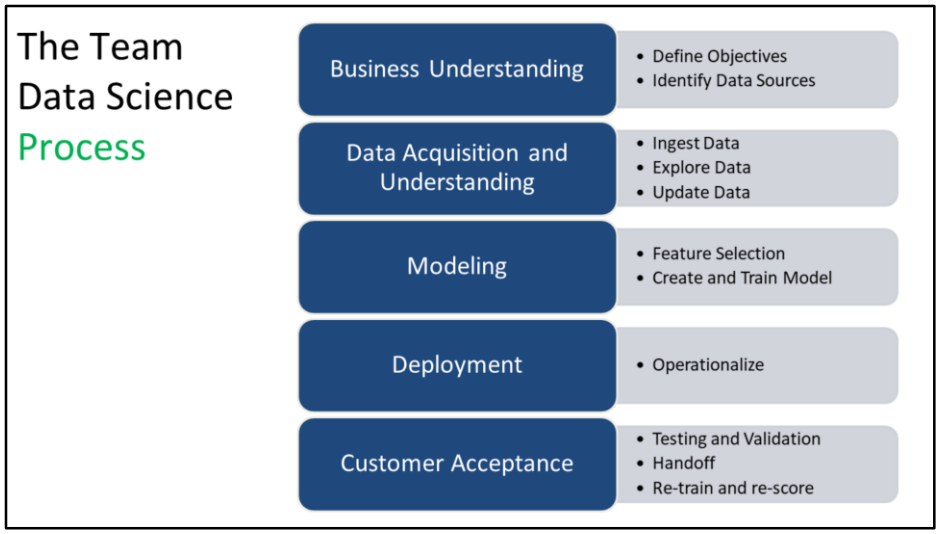
NOTE: These workbooks contain many resources to lead you through the course, and provide a rich set of references that you can use to learn much more about these topics. If the links do not resolve properly, type the link address in manually in your web browser. If the links have changed or been removed, simply enter the title of the link in a web search engine to find the new location or a corollary reference.



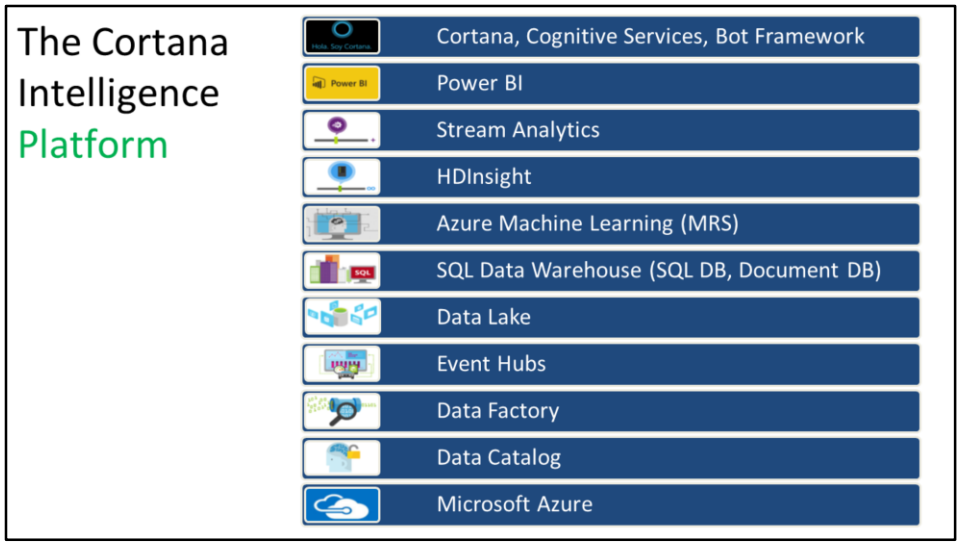
1. At the end of this Module, you will:
    1. Know how to operationalize a SQL Server R Services environment
    2. Use the Microsoft R capabilities in a solution

The Data Science Process and Platform



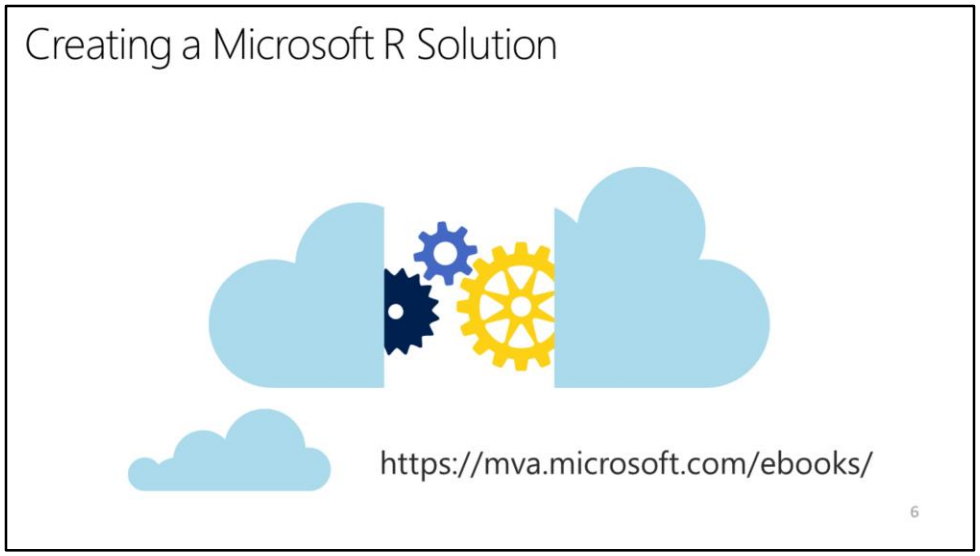


1. This process largely follows the CRISP-DM model: http://www.sv-europe.com/crisp-dm-methodology/
2. It also references the Cortana Intelligence process: https://azure.microsoft.com/en-us/documentation/articles/data-science-process-overview/
3. A complete process diagram is here: https://azure.microsoft.com/en-us/documentation/learning-paths/cortana-analytics-process/
4. Some walkthrough's of the various services: https://azure.microsoft.com/en-us/documentation/articles/data-science-process-walkthroughs/
5. An integrated process and toolset allows for a more close-to-intent deployment
6. Iterations are required to close in on the solution – but are harder to manage and monitor

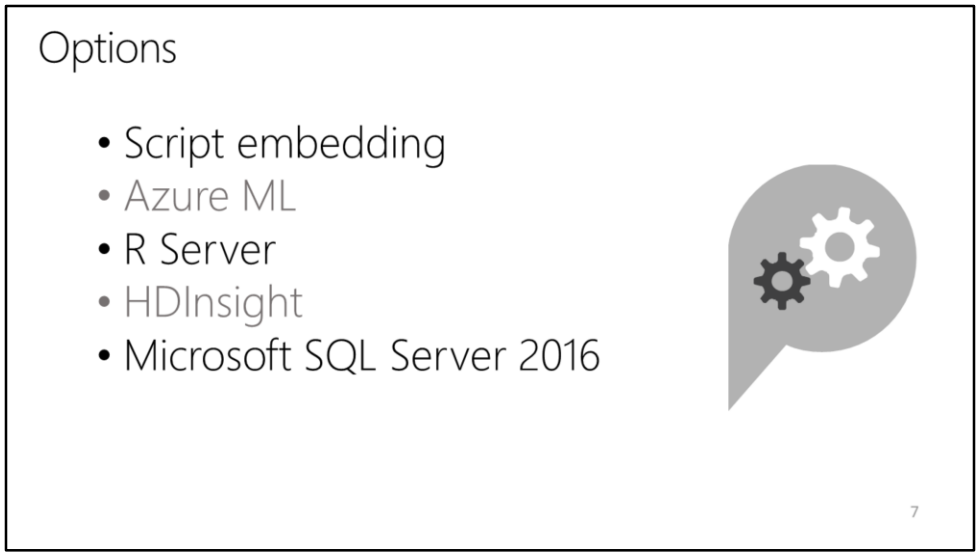


1. Platform and Storage: Microsoft Azure – http://microsoftazure.com Storage: https://azure.microsoft.com/en-us/documentation/services/storage/ (Host It)
2. Azure Data Catalog: http://azure.microsoft.com/en-us/services/data-catalog (Doc It)
3. Azure Data Factory: http://azure.microsoft.com/en-us/services/data-factory/ (Move It)
4. Azure Event Hubs: http://azure.microsoft.com/en-us/services/event-hubs/ (Bring It)
5. Azure Data Lake: http://azure.microsoft.com/en-us/campaigns/data-lake/ (Store It)
6. Azure DocumentDB: https://azure.microsoft.com/en-us/services/documentdb/ , Azure SQL Data Warehouse: http://azure.microsoft.com/en-us/services/sql-data-warehouse/ (Relate It)
7. Azure Machine Learning: http://azure.microsoft.com/en-us/services/machine-learning/ (Learn It)
8. Azure HDInsight: http://azure.microsoft.com/en-us/services/hdinsight/ (Scale It)
9. Azure Stream Analytics: http://azure.microsoft.com/en-us/services/stream-analytics/ (Stream It)
10. Power BI: https://powerbi.microsoft.com/ (See It)
11. Cortana: http://blogs.windows.com/buildingapps/2014/09/23/cortana-integration-and-speech-recognition-new-code-samples/ and https://blogs.windows.com/buildingapps/2015/08/25/using-cortana-to-interact-with-your-customers-10-by-10/ and https://developer.microsoft.com/en-us/Cortana (Say It)
12. Cognitive Services: https://www.microsoft.com/cognitive-services
13. Bot Framework: https://dev.botframework.com/
14. All of the components within the suite: https://www.microsoft.com/en-us/server-cloud/cortana-intelligence-suite/what-is-cortana-intelligence.aspx
15. What can I do with it? https://gallery.cortanaintelligence.com/

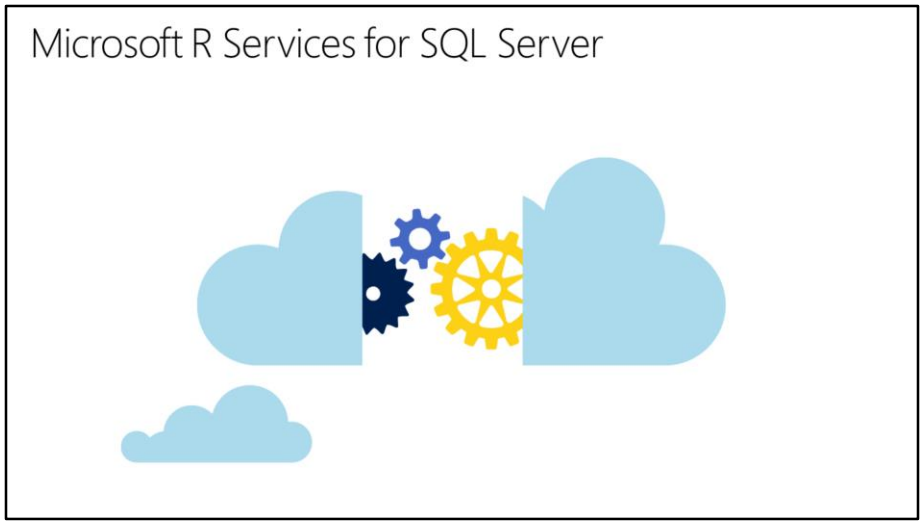
16. Getting Started Quickly: https://caqs.azure.net/#gallery



1. Complete introduction: https://msdn.microsoft.com/en-us/microsoft-r/microsoft-r-getting-started



1. Extended Events for SQL Server R Services: https://msdn.microsoft.com/en-us/library/mt628054.aspx

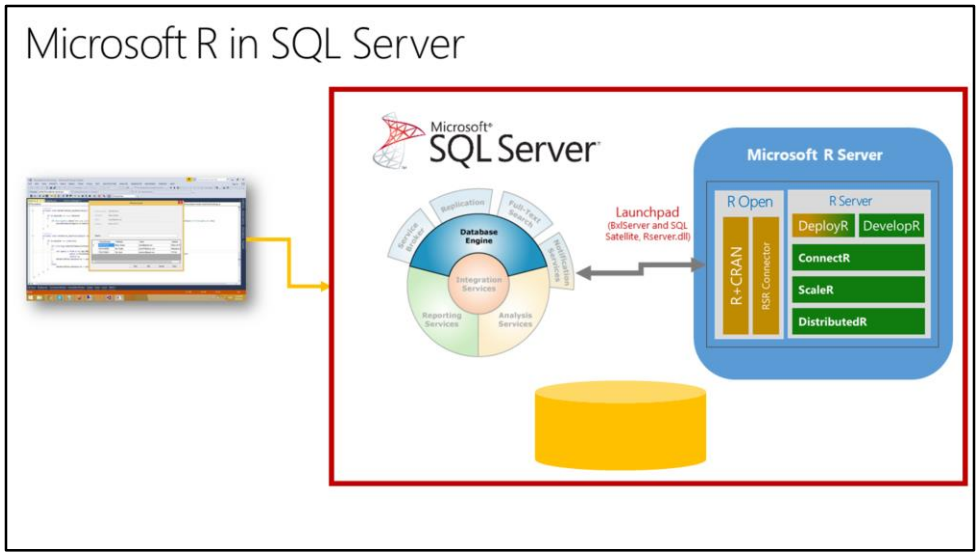


1. Great set of resources: https://www.r-bloggers.com/r-and-sql-server-articles/amp/

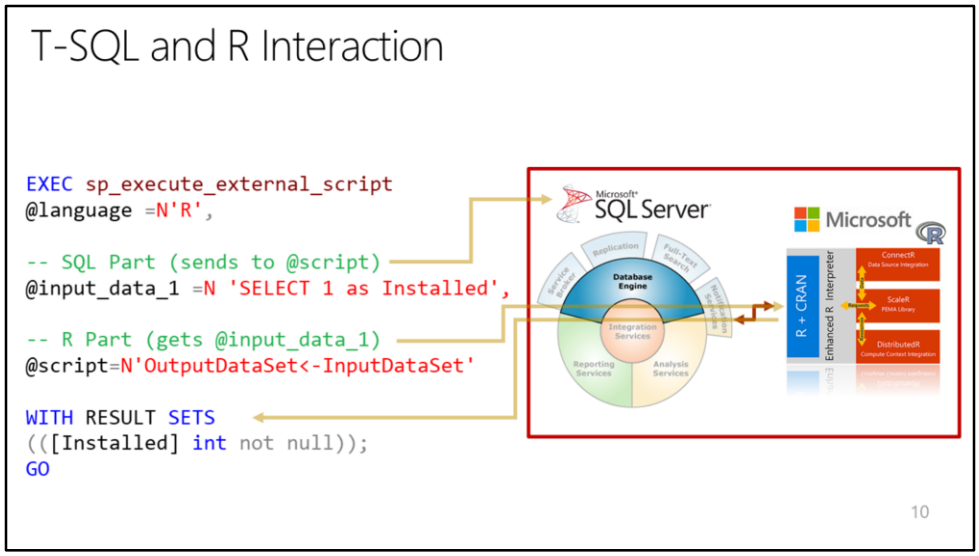
Using statistics in T-SQL :

- https://curiousaboutdata.com/2016/11/21/associative-analytics-two-sample-t-test/
- https://curiousaboutdata.com/2016/09/21/associative-statistics-one-sample-t-test-with-tsql-and-r/
- https://curiousaboutdata.com/2016/09/13/statistics-chi-square-test/

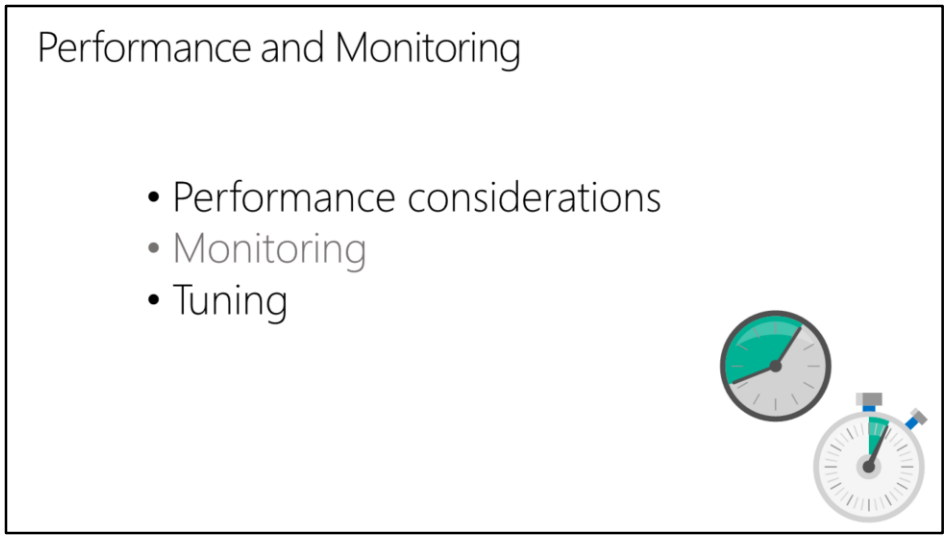
https://curiousaboutdata.com/2016/09/05/statistics-with-t-sql-and-r-the-pearsons-correlation-coefficient/



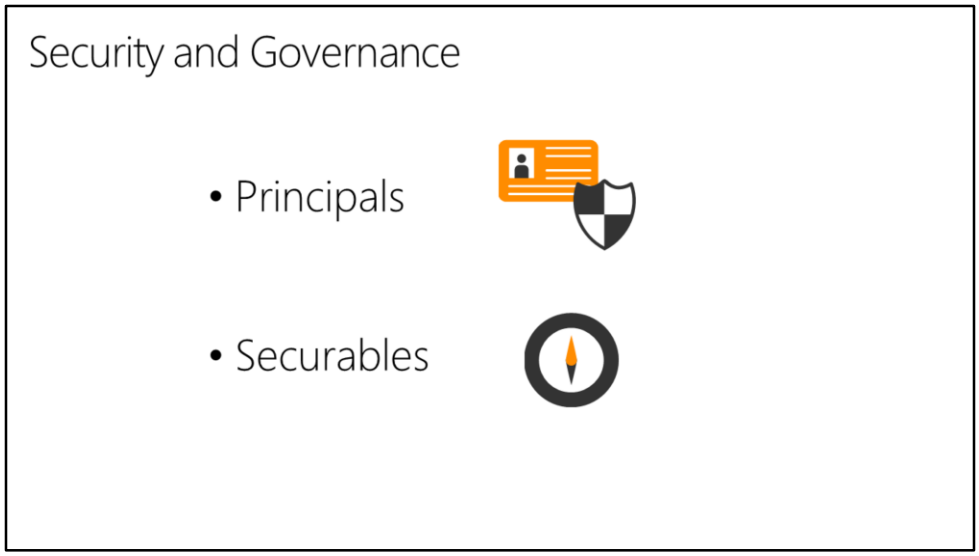
1. Primary Documentation and training: https://msdn.microsoft.com/en-us/library/mt604845.aspx
2. Also add-ins for other services like SSIS: https://msdn.microsoft.com/en-us/library/mt146770.aspx



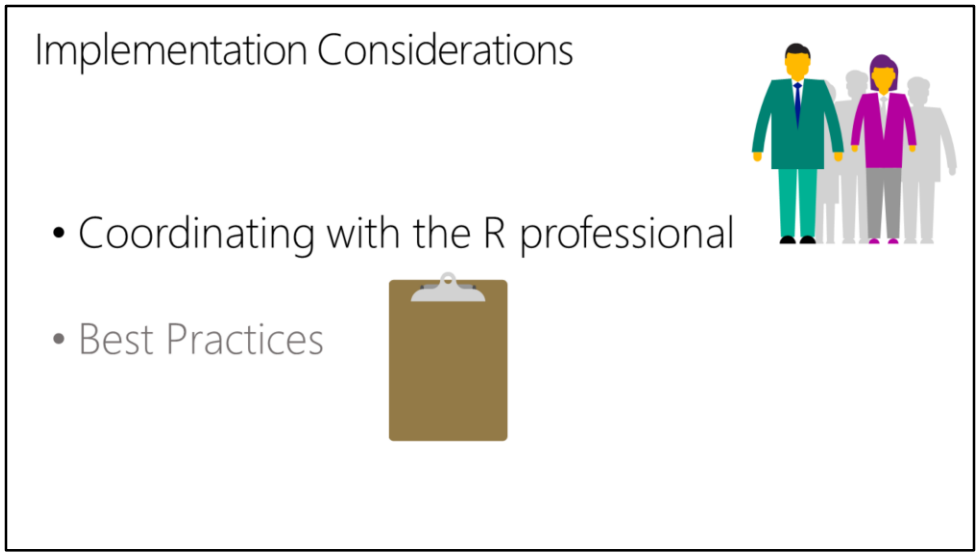
1. Components and Architecture: https://msdn.microsoft.com/en-us/library/mt709082.aspx (with graphics)



1. Extended Events for SQL Server R Services: https://msdn.microsoft.com/en-us/library/mt628054.aspx



1. Security Overview: https://msdn.microsoft.com/en-us/library/mt709078.aspx



1. Managing and monitoring R Solutions for SQL Server: https://msdn.microsoft.com/en-us/library/mt590866.aspx
2. Upgrade and Installation: https://msdn.microsoft.com/en-us/library/mt653951.aspx
3. Considerations: https://msdn.microsoft.com/en-us/library/mt590540.aspx

1. Option 1: https://www.microsoft.com/en-us/sql-server/developer-get-started/r
2. Option 2: Open the SQL Server R Services Lab from your \Resources folder, follow the instructions you find there. Source Materials are at: https://github.com/Microsoft/sql-server-samples/tree/master/samples/features/r-services/Telco%20Customer%20Churn
3. Option 3: Refer to this link: https://gallery.cortanaintelligence.com/Tutorial/Predictive-Maintenance-Template-with-SQL-Server-R-Services-1 and work through that example.
4. Channel 9 Video on these tutorials: https://channel9.msdn.com/Shows/Cloud+Cover/Episode-226-Microsoft-R-Server-Solutions
5. More labs: https://github.com/Microsoft/SQL-Server-R-Services-Samples and https://gallery.cortanaintelligence.com/Collection/ML-Templates-with-SQL-Server-R-Services-1

Questions?

More resources:

1. https://msdn.microsoft.com/en-us/microsoft-r/microsoft-r-more-resources
2. Revolutions Blog
3. Blog: Joseph Sirosh, "Making R the Enterprise Standard..."
4. Getting Started with Microsoft R
5. Diving In.. Data Analysis in Microsoft R
6. R Server Technology – Video
7. R Tools for Visual Studio Sneak Peek
8. R Tools for Visual Studio Overview
9. SQL R Services Overview – Youtube
10. SQL R Services Feature Overview - Youtube
11. SQL R Services Overview at Build
12. SQL R Services Tutorial