



R with SQL Server 2016

LEE HAWTHORN @ BETFRED

BI DEVELOPMENT LEAD

@LEE_HAWTHORN

LEEHB.COM

Agenda

- ▶ SQL Server 2016 introduction
- ▶ Workflow
- ▶ Developer tools
- ▶ Demo

SQL SERVER 2016

Features	Enterprise	Standard	Express	Developer
Basic R integration: connectivity to R open, limited parallelism	Yes	Yes	Yes	Yes
Advanced R integration: full parallelism ScaleR	Yes			Yes

Data discovery/transforms

- ▶ Normal R Workflow
 - ▶ RODBC/SQLDF
- ▶ With SQL Server
 - ▶ Operational Data Store
 - ▶ Run R on the SQL Server that holds the data

Deployment

- ▶ Normal R Workflow
- ▶ With SQL Server
 - ▶ Target specific event
 - ▶ Customer Acquisition
 - ▶ Churn
 - ▶ Cross Sell
- ▶ Deploy to SQL Server (hex)
- ▶ Execute via stored procedures

Developer tools

- ▶ SQL Server Management Studio
 - ▶ Create stored procedures
 - ▶ Data exploration
- ▶ Visual Studio 2015 Community (with R Tools)

DEMO

- ▶ New York Taxi data set
- ▶ Logistic Regression to predict if a driver will get a tip
- ▶ Code and Walkthrough available on MSDN

Takeaways

- ▶ Talk to your DBA's and make friends!
- ▶ Install SQL Server Developer edition (it's free for development)
 - ▶ <http://bit.ly/2fO2h0Q>
- ▶ Check out the Data Science Walk-through from Microsoft
 - ▶ <http://bit.ly/2fYMKc9>
- ▶ Investigate Microsoft R Open (ex Revolution R Open)
 - ▶ <http://bit.ly/2gxUC7U>