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Data Mining with SQL Server 2008 Business Intelligence Development Studio A Hands-on Approach

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Tutorial and Workshop Proposal for AMCIS 2009

Submission Date:	Friday, Feb 19, 2010
Workshop/tutorial Title:	Data Mining with SQL Server 2008 Business Intelligence Development Studio A Hands-on Approach
Duration:	( ) Full Day (**X**) Half Day
Classification:	(X) Tutorial ( ) Workshop

Abstract

Data mining is an emerging field of study in Information Systems programs. The purpose of this tutorial is to provide a hands-on approach on how to utilize SQL Server 2008 Business Intelligence platforms to teach a senior level data mining methods class in an Information Systems program. Our intention is to highlight the capabilities of the platform to faculty currently teaching a business intelligence course and are interested in expanding their teaching portfolio to the data mining area with hands-on exercises and projects. The platform allows faculty to focus on teaching the analytical aspects of data mining and the usage of algorithms through practical hands-on demonstrations, homework assignments and projects. As a result, students are expected to gain a conceptual understanding of data mining and the application of data mining algorithms for the purpose of decision support. Such a platform allows faculty to provide a comprehensive coverage of the topic with practical hands-on experience. The availability of this set of tools transforms the role of a student from a programmer of data mining algorithms (doing low level IT) to a business intelligence analyst.

Workshop Leader Information (Please attach a copy of your resume in your email submission)

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Additional Workshop Presenters (copy for each one)

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Speakers' background, description of workshop, and envisioned activities during the workshop (please provide information for each speaker)

Detailed Description;

Speakers background:

Our attached vitas detail our academic background and education. We have been teaching a senior level data mining methods class for the past three years. We published two pedagogy papers and gave a conference workshop on the topic similar to the one we are proposing for AMCIS-2010.

Description of the Workshop and envisioned Activities:

1. To establish a common base, we will start with an introduction to data mining. In the mean time we will also help interested faculty to install SQL Server Business Intelligence development studio on their machines and configure it to connect to our machine that will act as the data mining engine server via a wireless router.
2. We will introduce the concept of association analysis, then we provide a hands on exercise on the topic.
3. We will introduce the concept of classification analysis which includes decision trees, naive Bayes and neural networks, then we provide hands on exercises on the topic. We will also introduce model comparisons and lift charts with hands-on exercises.
4. We will introduce the concept of cluster analysis , then we provide a hands-on exercise on the topic.
5. We will use public domain data sets such as the Iris and Mushrooms data sets from the UCI repository.

Special Requirements

Note: Regular equipment includes a computer, projector and screen.

( ) Computers

( ) Internet Access

(**X**) Others, Please specify: _____Two overhead projectors to minimize the switching between the slides and the demo. It will allow us to use one laptop for the presentation and another one for the demo._____

Audience

Insert a description of likely participants

Maximum number of participants:_____25_____

Specify the requirements for the audience such as computer, special software, and Internet access etc., in the following:

1- We will use one of our laptops as a database server and a backend data mining engine. We will use a wireless router to allow participants to connect to our database server.

2- Active participants are those who choose to bring their laptop with them. We will help them to install the client component of SQL Server 2008 Business intelligence development studio and configure their environment to connect to our database server via the wireless router. Active participant can follow on with hands on exercises.

3- Passive participants are those who choose not use their laptop. They can participate and ask questions.