BIDSS Assignment 03

Report of my introduction, BIDSS and case study

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Biographical Sketch:

In introducing myself; my name is Mike Pendleton, I am 43 with a wife, two sons, and one daughter. The majority of my younger life was in California until I moved to texas when I was 24. The degree I am persuing is a Masters of Science in Computer Information Systems and Business Analytics. With business Intelligence constantly evolving, there is several components that would be leveraged from this subject matter. For instance pandas, git hub, visual studio use of code development for the source code I use and getting data from multiple sources.

This leads my to where I work which is at Crowdstrike. We are a anti-malware security firm and coinciding business data for how we help protect customers is a great example of BI. We collect telemetry from events received from systems and then determine if the behavior from all events would lead to a metric of malware behavior. Machine learning is adaptive and how BI can be used for other methods and not just to collect data for informational purposes.

For the last bullet point, I am not really apprehensive about this topic aside from how much there is to cover in such a short time from being a summer semester. This of course is known, but will do my best in order to do well in the course and to continue my path in my career, where education is key in helping progress. Just being in IT over the last 16 plus years, even if your not in college there is consistent development and changes to technology so it is a field of study where you are also learning and evolving every day.

Business Intelligence and Decision Support Systems:

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During my research on this topic and from the beginning of the course, I had made a determination from the beginning that BI and DSS are independent and are used together. According to (Thor Olavsrud , 2022), this is an accurate assessment. "DSS and business intelligence (BI) are often conflated. Some experts consider BI a successor to DSS. Decision support systems are generally recognized as one element of business intelligence systems, along with data warehousing and data mining."

Business Intelligence contains a multitude of opportunities for how to gather, and manage data. Mining from sites on the internet is one example, and then the need to store all of the data collected into a data warehouse. Once all the data is captured and cleaned, which is then going to be reflected in the data warehouse; then other BI tools can be leveraged such as Decision Support Systems.

Now that there is a clear difference that DSS is a component of BI, then what exactly is DSS? Though I had the separation of the two clear in the begging, I also did not fully understand the key differences until researching this topic. DSS would be leveraging tools from the data collected from and leveraged with BI. Tools such as Aritificial Intelligence and Machine learning are two examples of DSS as noted from Thor Olavsrud referenced above.

The components of DSS would include the Database, software system and the user interface. Under the software system category there is particular models depending upon the purpose of the DSS. These include statistical, sensitivity analysis, optimization analysis model, forecasting, and backward analysis sensitivity. The software would be used with the user interface so that visualization can be displayed for decisions to be made. For instance organizations using MRP software such as SAP, continually review all data sales trends to determine on if particular products need to be purchased ahead of time or if the products should be stored in the physical warehouse for orders.

With all the benefits that DSS can bring with BI, then how to manage any concerns along with these technologies? The obvious battle would be vulnerabilities and risk for the methods of storage and software integrated. Continually leveraging tools to account for CVE's for known software exploits, so that these components can be patched quickly. This is important to consider because there is an underlying expectancy that anti malware products protect against vulnerabilities. Ultimately this is false, AV software protects against what may compromise the vulnerability but not the vulnerability itself. Aside from vulnerabilities, there is another interesting concern for AI in replacing jobs. According to (Christina Pazzanese, 2020), It is referring to AI ""It's allowing them to do more stuff better, or to make fewer errors, or to capture their expertise and disseminate it more effectively in the organization," said Fuller, who has studied the effects and attitudes of workers who have lost or are likeliest to lose their jobs to AI. I find this is interesting, as I was not expecting a concern such as potential employment opportunities either lost or no longer needed due to what AI can do to benefit organizations. However, I can also see where this concern would be more for individuals than the lower cost in savings in staffing for these organizations.

Open ended section for a use case in BIDSS:

As mentioned in the about me in the beginning of the report since I work for crowdstrike, then I am interested in anti-malware products and how they leverage BIDSS. Here documented on their website for what Next-Generation Antivirus is the following (Crodstrike, n.d.). "Next-Generation Antivirus (NGAV) uses a combination of artificial intelligence, behavioral detection, machine learning algorithms, and exploit mitigation, so known and unknown threats can be anticipated and immediately prevented.

NGAV is cloud-based, which allows it to be deployed in hours instead of months, and the burden of

maintaining software, managing infrastructure, and updating signature databases is eliminated."

Crowdstrike is not the only vendor that utilizes machine learning and AI. Mcafee leverages this with

their EDR product, as well as several other vendors. I just happen to have more knowledge of McAfee

and Crowdstrike because of the 5 years of employment with McAfee (now known as Trellix) and my

current employment at Crowdstrike as a Senior Technical Support Engineer.

References

Christina Pazzanese. (2020, October 26). *Ethical concerns mount as AI takes bigger decision-making role in more industries*. Retrieved from The Harvard Gazette: https://news.harvard.edu/gazette/story/2020/10/ethical-concerns-mount-as-ai-takes-bigger-decision-making-role/

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Thor Olavsrud . (2022, November 22). *What are decision support systems? Sifting data for better business decisions*. Retrieved from CIO: https://www.cio.com/article/193521/decision-support-systems-sifting-data-for-better-business-decisions.html