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**CIS611HOS1P2024 - Introduction to Business Analytics**

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*Unit 1: Discussion*

Hello, Class and Professor,

I am Avinash Bunga. My journey into business analytics began at Uber and Goldman Sachs, where I engaged in fraud and risk analysis. There, I learned to navigate vast datasets, uncovering insights to explain past events and inform future decisions. Below are the critical analytical concepts I have encountered and look forward to mastering.

### **Predictive Analytics**

- **Detailed Definition:** Predictive Analytics involves analyzing past business data to make informed estimations about future outcomes. It uses historical information and statistical algorithms to identify potential trends and behaviors affecting a business in upcoming scenarios (Raghupathi & Raghupathi, 2021).
- **Importance in Business Analytics:** Essential for proactive planning and risk management.
- **My Familiarity:** At Uber, while I gained foundational knowledge, my role centered on manual investigation and understanding patterns from raw data, rather than hands-on predictive modeling.
- **Learning Goals:** To gain practical experience in predictive modeling and apply it in automated decision-making processes.

- **Example Implementation:** At Uber, predictive analytics could be employed to analyze trip data from previous holiday seasons. This analysis would enable us to project demand for the upcoming season. By understanding these trends, we can strategically plan driver incentive schemes, ensuring a sufficient number of drivers are available to meet the expected increase in passenger requests. This method optimizes driver allocation and enhances overall service efficiency during the busy holiday period.

## Regression

- **Detailed Definition:** Regression analysis determines how a main variable changes when other variables vary. It is a statistical approach to determine the influence of different factors on a specific outcome (Bennett, 2023).
- **Importance in Business Analytics:** Vital for identifying factors influencing business outcomes and decision-making.
- **My Familiarity:** I have not had the opportunity to engage in regression analysis in my career. Therefore, learning and excelling in regression analysis is my significant goal.
- **Learning Goals:** To explore various types of regression analysis and their application in broader business contexts.
- **Example Implementation:** In the context of Uber, regression analysis could be used to examine the relationship between trip frequency and various factors like weather conditions, local events, or time of day. For instance, by analyzing how rain impacts the number of ride requests in a specific area, Uber can better understand and predict demand patterns. This information could then be used to adjust pricing dynamically or to ensure adequate drivers are available during such conditions, optimizing both service availability and customer satisfaction.

## Tableau

- **Detailed Definition:** Tableau is a tool designed for visual analytics, enabling users to create interactive and shareable dashboards. It transforms raw data into an understandable format, using visualization techniques to present information in a more graphic and intuitive way (Biswal, 2023).
- **Importance in Business Analytics:** Simplifies data interpretation, aiding in quick and informed decision-making.
- **My Familiarity:** Proficient in a professional setting, but seeking to expand my skills, especially in handling large-scale data.
- **Learning Goals:** To master advanced visualization techniques for comprehensive data analysis. I want to master my skills, especially with Tableau Server or Tableau Cloud.
- **Example Implementation:** During my tenure at Uber, I utilized Tableau to track and analyze fraud losses on a monthly basis. By creating detailed visual dashboards, I could depict trends and patterns in fraudulent activities over time. This visual analysis was instrumental in identifying high-risk periods and patterns, enabling us to take proactive measures. It also helped communicate these insights effectively to the management team, aiding in strategic decision-making to mitigate future fraud risks.

## Simulation and What-If Analysis

- **Detailed Definition:** This involves creating various hypothetical scenarios using predictive models to understand how changes in variables might impact future outcomes. It is like conducting a series of controlled experiments to predict the results of different decisions (Ballinger, 2023).

- **Importance in Business Analytics:** Essential for evaluating potential outcomes and optimizing decision-making before actual implementation, especially in uncertain or risky situations.
- **My Familiarity:** At Uber, my role in analyzing fraud patterns included conducting what-if analyses. We frequently examined potential losses under varying conditions, suggesting necessary changes and strategies to mitigate such risks in the future. This experience gave me practical insight into applying simulation and scenario analysis in a real-world business context.
- **Learning Goals:** To deepen my knowledge of building and applying simulation models for comprehensive scenario analysis and strategic planning.
- **Example Implementation at Uber:** This could involve simulating different operational changes or market conditions to assess their impact on demand, supply, and fraud patterns, thus helping in crafting well-informed strategies for pricing and service optimization.

In conclusion, as I embark on this educational journey, I am enthusiastic about blending my practical experiences at Uber with this program's theoretical and technical knowledge.

Predictive Analytics, Regression, Tableau, and Simulation / What-If Analysis are not just academic subjects for me; they are tools that have real-world applications in my past and future roles. By deepening my understanding and expanding my skill set in these areas, I aim to contribute more effectively to data-driven decision-making processes and continue to grow as a business analytics professional.

I look forward to sharing my experiences with and learning from all of you in this course.

All The Best!

### References:

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