



Cairo University

**CMPS451 – Data Mining, Big Data and Data Analytics**  
**Spring 2024**

**Project Proposal (Resubmission)**

Submitted to:

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In response to feedback on our initial proposal, this resubmission aims to address the concerns We have refined our approach to leverage the NBA shot logs dataset for analytics, ensuring clarity on objectives and methodologies. Through this resubmission, we demonstrate a thorough understanding of the project's potential while addressing specific concerns.

### **1. Target Value or Finding:**

The primary objective is to predict shot outcomes (made or missed) based on NBA shot logs data, with secondary objectives including analyzing factors influencing shot efficiency and identifying patterns in shot selection and performance based on game situations.

### **2. Extensive Exploratory Data Analysis (EDA) and Visualizations:**

We plan to conduct comprehensive EDA to understand dataset characteristics and patterns, creating visualizations such as shot distribution across the court, shooting percentages from different areas, and temporal trends in shooting performance.

### **3. Focusing on Model Selection and Comparison:**

Following EDA, we'll select and evaluate machine learning models (e.g., Logistic Regression, Random Forest, Neural Networks) using cross-validation techniques and performance metrics to compare and identify the most effective approach.