In the dynamic landscape of business evaluation, determining the success and popularity of enterprises is crucial for stakeholders ranging from investors to consumers. This paper proposes a set of metrics to classify businesses into categories of "successful" and "popular." The metrics consider various factors such as review ratings and check-ins, aiming to provide a comprehensive assessment.

**Successful Metrics:**

**ReviewRating (Average Rating): The primary variable**; ReviewRating returns the average rating which is an obvious indicator of a business getting high satisfaction ratings. A higher review rating can signify better business performance.

**ReviewCount:** **The secondary variable**, not weighed in the metric but considered; ReviewCount returns the number of reviews shows its levels of engagement within a business. A higher review count generally indicates greater customer interaction and interest in the business.

**A business is considered successful if:**

The reviewRating is higher than **3.5**, indicating generally positive feedback from customers.

The reviewCount is secondary but not factored in the query, mainly to reflect significant customer engagement interest in the business.

**Query Example:**

**SELECT** name,reviewrating,reviewcount **FROM** business **WHERE** reviewrating > 3.5 **AND** zipcode=85283 **ORDER BY** reviewrating **DESC**;

The query above returns a table containing all of the businesses in zipcode 85283 we are classifying as successful. The table contains all of the businesses that have a **reviewrating** or average ratinggreater than 3.5 while displaying the businesses with their respective names, reviewrating, and reviewcounts from greatest reviewrating to lowest for more successful businesses.

**Popular Metrics:**

**NumCheckIns: The primary effecting variable**; is the number check-ins at a business location shows a strong indicator of its popularity among consumers. Higher check-in rates imply a larger customer base and a lot more traffic.

**ReviewCount:** The secondary and non-affecting variable; reviewCount contributes to popularity, it’s provided for consideration but is not weighted. This is to ensure that businesses with fewer reviews, but high check-in rates aren’t overlooked.

**Comparison with Local Averages:** Popularity metrics are contextualized by comparing a business's check-in with its respective average within its category and location. This ensures a fair assessment relative to local market conditions.

**A business is considered popular if:**

The number of check-ins is highgher than the average check-ins for that business category in the respective zipcode is met or exceeded, suggesting above-average popularity within its local market.

**Sub query example for calculating average numCheckIns:**

**SELECT AVG**(numCheckins) AS avgNumCheckins **FROM** business **WHERE** business\_Id **IN** (**SELECT** business\_id **FROM** categories **WHERE** business\_id **IN** (**SELECT** business\_id **FROM** business **WHERE** zipcode=85283) **AND** category='Fast Food');

The query above is the subquery used in our query for the table of businesses we are classifying as popular for a given zipcode and category. The query above is necessary to get the average number of checkins for a given zipcode and category which in this case are 85283 and ‘Fast Food’ respectively

**Query Example for popular businesses:**

**SELECT** name,numCheckins,reviewCount **FROM** business **WHERE** business\_id **IN** (SELECT business\_id **FROM** categories **WHERE** business\_id **IN** (SELECT business\_id **FROM** business **WHERE** zipcode=85283) **AND** category='Fast Food') **AND** numCheckins >= (**SELECT** A**VG**(numCheckins) **AS** avgNumCheckins **FROM** business **WHERE** business\_Id **IN** (**SELECT** business\_id **FROM** categories **WHERE** business\_id **IN** (**SELECT** business\_id **FROM** business **WHERE** zipcode=85283) **AND** category='Fast Food')) **ORDER BY** numCheckins **DESC**;

The query above is used to get the table containing all of the businesses we are classifying as popular for a given zipcode and category which in this case are 85283 and ‘Fast Food’ respectively. The query first executes the subquery which gets the average number of checkins for a given zipcode and category as avgNumCheckins and then finds the businesses in the same zipcode and category which have a number of checkins greater than or equal to the average.

In conclusion, the metrics provide a balanced framework for classifying businesses based on their success and popularity. By considering both qualitative (review ratings) and quantitative (check-ins) factors, stakeholders can gain insights into the performance and appeal of businesses within their respective markets.