# Signals for Candidate Sources

## Overview

The candidate sourcing stage within the Twitter Recommendation algorithm serves to significantly narrow down the item size from approximately 1 billion to just a few thousand. This process utilizes Twitter user behavior as the primary input for the algorithm. This document comprehensively enumerates all the signals during the candidate sourcing phase.

| Signals | Description |

| :-------------------- | :-------------------------------------------------------------------- |

| Author Follow | The accounts which user explicit follows. |

| Author Unfollow | The accounts which user recently unfollows. |

| Author Mute | The accounts which user have muted. |

| Author Block | The accounts which user have blocked |

| Tweet Favorite | The tweets which user clicked the like botton. |

| Tweet Unfavorite | The tweets which user clicked the unlike botton. |

| Retweet | The tweets which user retweeted |

| Quote Tweet | The tweets which user retweeted with comments. |

| Tweet Reply | The tweets which user replied. |

| Tweet Share | The tweets which user clicked the share botton. |

| Tweet Bookmark | The tweets which user clicked the bookmark botton. |

| Tweet Click | The tweets which user clicked and viewed the tweet detail page. |

| Tweet Video Watch | The video tweets which user watched certain seconds or percentage. |

| Tweet Don't like | The tweets which user clicked "Not interested in this tweet" botton. |

| Tweet Report | The tweets which user clicked "Report Tweet" botton. |

| Notification Open | The push notification tweets which user opened. |

| Ntab click | The tweets which user click on the Notifications page. |

| User AddressBook | The author accounts identifiers of the user's addressbook. |

## Usage Details

Twitter uses these user signals as training labels and/or ML features in the each candidate sourcing algorithms. The following tables shows how they are used in the each components.

| Signals | USS | SimClusters | TwHin | UTEG | FRS | Light Ranking |

| :-------------------- | :----------------- | :----------------- | :----------------- | :----------------- | :----------------- | :----------------- |

| Author Follow | Features | Features / Labels | Features / Labels | Features | Features / Labels | N/A |

| Author Unfollow | Features | N/A | N/A | N/A | N/A | N/A |

| Author Mute | Features | N/A | N/A | N/A | Features | N/A |

| Author Block | Features | N/A | N/A | N/A | Features | N/A |

| Tweet Favorite | Features | Features | Features / Labels | Features | Features / Labels | Features / Labels |

| Tweet Unfavorite | Features | Features | N/A | N/A | N/A | N/A |

| Retweet | Features | N/A | Features / Labels | Features | Features / Labels | Features / Labels |

| Quote Tweet | Features | N/A | Features / Labels | Features | Features / Labels | Features / Labels |

| Tweet Reply | Features | N/A | Features | Features | Features / Labels | Features |

| Tweet Share | Features | N/A | N/A | N/A | Features | N/A |

| Tweet Bookmark | Features | N/A | N/A | N/A | N/A | N/A |

| Tweet Click | Features | N/A | N/A | N/A | Features | Labels |

| Tweet Video Watch | Features | Features | N/A | N/A | N/A | Labels |

| Tweet Don't like | Features | N/A | N/A | N/A | N/A | N/A |

| Tweet Report | Features | N/A | N/A | N/A | N/A | N/A |

| Notification Open | Features | Features | Features | N/A | Features | N/A |

| Ntab click | Features | Features | Features | N/A | Features | N/A |

| User AddressBook | N/A | N/A | N/A | N/A | Features | N/A |