package com.twitter.timelines.prediction.features.common

import com.twitter.dal.personal\_data.thriftjava.PersonalDataType.\_

import com.twitter.ml.api.Feature

import com.twitter.ml.api.FeatureType

import com.twitter.ml.api.Feature.Binary

import java.lang.{Boolean => JBoolean}

import scala.collection.JavaConverters.\_

object CombinedFeatures {

val IS\_CLICKED =

new Binary("timelines.engagement.is\_clicked", Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_DWELLED =

new Binary("timelines.engagement.is\_dwelled", Set(TweetsViewed, EngagementsPrivate).asJava)

val IS\_DWELLED\_IN\_BOUNDS\_V1 = new Binary(

"timelines.engagement.is\_dwelled\_in\_bounds\_v1",

Set(TweetsViewed, EngagementsPrivate).asJava)

val IS\_FAVORITED = new Binary(

"timelines.engagement.is\_favorited",

Set(PublicLikes, PrivateLikes, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_FOLLOWED = new Binary(

"timelines.engagement.is\_followed",

Set(EngagementsPrivate, EngagementsPublic, Follow).asJava)

val IS\_IMPRESSED =

new Binary("timelines.engagement.is\_impressed", Set(TweetsViewed, EngagementsPrivate).asJava)

val IS\_OPEN\_LINKED = new Binary(

"timelines.engagement.is\_open\_linked",

Set(EngagementsPrivate, LinksClickedOn).asJava)

val IS\_PHOTO\_EXPANDED = new Binary(

"timelines.engagement.is\_photo\_expanded",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_PROFILE\_CLICKED = new Binary(

"timelines.engagement.is\_profile\_clicked",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_QUOTED = new Binary(

"timelines.engagement.is\_quoted",

Set(PublicRetweets, PrivateRetweets, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_REPLIED = new Binary(

"timelines.engagement.is\_replied",

Set(PublicReplies, PrivateReplies, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_RETWEETED = new Binary(

"timelines.engagement.is\_retweeted",

Set(PublicRetweets, PrivateRetweets, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_RETWEETED\_WITHOUT\_QUOTE = new Binary(

"timelines.enagagement.is\_retweeted\_without\_quote",

Set(PublicRetweets, PrivateRetweets, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_SHARE\_DM\_CLICKED =

new Binary("timelines.engagement.is\_tweet\_share\_dm\_clicked", Set(EngagementsPrivate).asJava)

val IS\_SHARE\_DM\_SENT =

new Binary("timelines.engagement.is\_tweet\_share\_dm\_sent", Set(EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_25 = new Binary(

"timelines.engagement.is\_video\_playback\_25",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_50 = new Binary(

"timelines.engagement.is\_video\_playback\_50",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_75 = new Binary(

"timelines.engagement.is\_video\_playback\_75",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_95 = new Binary(

"timelines.engagement.is\_video\_playback\_95",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_COMPLETE = new Binary(

"timelines.engagement.is\_video\_playback\_complete",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_PLAYBACK\_START = new Binary(

"timelines.engagement.is\_video\_playback\_start",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_VIEWED = new Binary(

"timelines.engagement.is\_video\_viewed",

Set(MediaEngagementActivities, EngagementsPrivate).asJava)

val IS\_VIDEO\_QUALITY\_VIEWED = new Binary(

"timelines.engagement.is\_video\_quality\_viewed",

Set(MediaEngagementActivities, EngagementsPrivate).asJava

)

// v1: post click engagements: fav, reply

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_V1 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_favorited\_or\_replied",

Set(

TweetsClicked,

PublicLikes,

PrivateLikes,

PublicReplies,

PrivateReplies,

EngagementsPrivate,

EngagementsPublic).asJava)

// v2: post click engagements: click

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_V2 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_v2",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_GOOD\_CLICKED\_WITH\_DWELL\_SUM\_GTE\_60S = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_favorited\_or\_replied\_or\_dwell\_sum\_gte\_60\_secs",

Set(

TweetsClicked,

PublicLikes,

PrivateLikes,

PublicReplies,

PrivateReplies,

EngagementsPrivate,

EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_FAVORITED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_favorited",

Set(PublicLikes, PrivateLikes, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_REPLIED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_replied",

Set(PublicReplies, PrivateReplies, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_RETWEETED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_retweeted",

Set(PublicRetweets, PrivateRetweets, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_CLICKED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_clicked",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_FOLLOWED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_followed",

Set(EngagementsPrivate).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_SHARE\_DM\_CLICKED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_share\_dm\_clicked",

Set(EngagementsPrivate).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_PROFILE\_CLICKED = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_profile\_clicked",

Set(EngagementsPrivate).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_UAM\_GT\_0 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_uam\_gt\_0",

Set(EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_UAM\_GT\_1 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_uam\_gt\_1",

Set(EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_UAM\_GT\_2 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_uam\_gt\_2",

Set(EngagementsPrivate, EngagementsPublic).asJava)

val IS\_GOOD\_CLICKED\_CONVO\_DESC\_UAM\_GT\_3 = new Binary(

"timelines.engagement.is\_good\_clicked\_convo\_desc\_uam\_gt\_3",

Set(EngagementsPrivate, EngagementsPublic).asJava)

val IS\_TWEET\_DETAIL\_DWELLED = new Binary(

"timelines.engagement.is\_tweet\_detail\_dwelled",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_TWEET\_DETAIL\_DWELLED\_8\_SEC = new Binary(

"timelines.engagement.is\_tweet\_detail\_dwelled\_8\_sec",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_TWEET\_DETAIL\_DWELLED\_15\_SEC = new Binary(

"timelines.engagement.is\_tweet\_detail\_dwelled\_15\_sec",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_TWEET\_DETAIL\_DWELLED\_25\_SEC = new Binary(

"timelines.engagement.is\_tweet\_detail\_dwelled\_25\_sec",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_TWEET\_DETAIL\_DWELLED\_30\_SEC = new Binary(

"timelines.engagement.is\_tweet\_detail\_dwelled\_30\_sec",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_DWELLED = new Binary(

"timelines.engagement.is\_profile\_dwelled",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_DWELLED\_10\_SEC = new Binary(

"timelines.engagement.is\_profile\_dwelled\_10\_sec",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_DWELLED\_20\_SEC = new Binary(

"timelines.engagement.is\_profile\_dwelled\_20\_sec",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_DWELLED\_30\_SEC = new Binary(

"timelines.engagement.is\_profile\_dwelled\_30\_sec",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_FULLSCREEN\_VIDEO\_DWELLED = new Binary(

"timelines.engagement.is\_fullscreen\_video\_dwelled",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_FULLSCREEN\_VIDEO\_DWELLED\_5\_SEC = new Binary(

"timelines.engagement.is\_fullscreen\_video\_dwelled\_5\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_FULLSCREEN\_VIDEO\_DWELLED\_10\_SEC = new Binary(

"timelines.engagement.is\_fullscreen\_video\_dwelled\_10\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_FULLSCREEN\_VIDEO\_DWELLED\_20\_SEC = new Binary(

"timelines.engagement.is\_fullscreen\_video\_dwelled\_20\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_FULLSCREEN\_VIDEO\_DWELLED\_30\_SEC = new Binary(

"timelines.engagement.is\_fullscreen\_video\_dwelled\_30\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_LINK\_DWELLED\_15\_SEC = new Binary(

"timelines.engagement.is\_link\_dwelled\_15\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_LINK\_DWELLED\_30\_SEC = new Binary(

"timelines.engagement.is\_link\_dwelled\_30\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_LINK\_DWELLED\_60\_SEC = new Binary(

"timelines.engagement.is\_link\_dwelled\_60\_sec",

Set(MediaEngagementActivities, EngagementTypePrivate, EngagementsPrivate).asJava)

val IS\_HOME\_LATEST\_VISITED =

new Binary("timelines.engagement.is\_home\_latest\_visited", Set(EngagementsPrivate).asJava)

val IS\_BOOKMARKED =

new Binary("timelines.engagement.is\_bookmarked", Set(EngagementsPrivate).asJava)

val IS\_SHARED =

new Binary("timelines.engagement.is\_shared", Set(EngagementsPrivate).asJava)

val IS\_SHARE\_MENU\_CLICKED =

new Binary("timelines.engagement.is\_share\_menu\_clicked", Set(EngagementsPrivate).asJava)

// Negative engagements

val IS\_DONT\_LIKE = new Binary("timelines.engagement.is\_dont\_like", Set(EngagementsPrivate).asJava)

val IS\_BLOCK\_CLICKED = new Binary(

"timelines.engagement.is\_block\_clicked",

Set(Blocks, TweetsClicked, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_BLOCK\_DIALOG\_BLOCKED = new Binary(

"timelines.engagement.is\_block\_dialog\_blocked",

Set(Blocks, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_MUTE\_CLICKED = new Binary(

"timelines.engagement.is\_mute\_clicked",

Set(Mutes, TweetsClicked, EngagementsPrivate).asJava)

val IS\_MUTE\_DIALOG\_MUTED =

new Binary("timelines.engagement.is\_mute\_dialog\_muted", Set(Mutes, EngagementsPrivate).asJava)

val IS\_REPORT\_TWEET\_CLICKED = new Binary(

"timelines.engagement.is\_report\_tweet\_clicked",

Set(TweetsClicked, EngagementsPrivate).asJava)

val IS\_CARET\_CLICKED =

new Binary("timelines.engagement.is\_caret\_clicked", Set(EngagementsPrivate).asJava)

val IS\_NOT\_ABOUT\_TOPIC =

new Binary("timelines.engagement.is\_not\_about\_topic", Set(EngagementsPrivate).asJava)

val IS\_NOT\_RECENT =

new Binary("timelines.engagement.is\_not\_recent", Set(EngagementsPrivate).asJava)

val IS\_NOT\_RELEVANT =

new Binary("timelines.engagement.is\_not\_relevant", Set(EngagementsPrivate).asJava)

val IS\_SEE\_FEWER =

new Binary("timelines.engagement.is\_see\_fewer", Set(EngagementsPrivate).asJava)

val IS\_UNFOLLOW\_TOPIC =

new Binary("timelines.engagement.is\_unfollow\_topic", Set(EngagementsPrivate).asJava)

val IS\_FOLLOW\_TOPIC =

new Binary("timelines.engagement.is\_follow\_topic", Set(EngagementsPrivate).asJava)

val IS\_NOT\_INTERESTED\_IN\_TOPIC =

new Binary("timelines.engagement.is\_not\_interested\_in\_topic", Set(EngagementsPrivate).asJava)

val IS\_NEGATIVE\_FEEDBACK =

new Binary("timelines.engagement.is\_negative\_feedback", Set(EngagementsPrivate).asJava)

val IS\_IMPLICIT\_POSITIVE\_FEEDBACK\_UNION =

new Binary(

"timelines.engagement.is\_implicit\_positive\_feedback\_union",

Set(EngagementsPrivate).asJava)

val IS\_EXPLICIT\_POSITIVE\_FEEDBACK\_UNION =

new Binary(

"timelines.engagement.is\_explicit\_positive\_feedback\_union",

Set(EngagementsPrivate).asJava)

val IS\_ALL\_NEGATIVE\_FEEDBACK\_UNION =

new Binary(

"timelines.engagement.is\_all\_negative\_feedback\_union",

Set(EngagementsPrivate).asJava)

// Reciprocal engagements for reply forward engagement

val IS\_REPLIED\_REPLY\_IMPRESSED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_impressed\_by\_author",

Set(EngagementsPrivate).asJava)

val IS\_REPLIED\_REPLY\_FAVORITED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_favorited\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateLikes, PublicLikes).asJava)

val IS\_REPLIED\_REPLY\_QUOTED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_quoted\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateRetweets, PublicRetweets).asJava)

val IS\_REPLIED\_REPLY\_REPLIED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_replied\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateReplies, PublicReplies).asJava)

val IS\_REPLIED\_REPLY\_RETWEETED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_retweeted\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateRetweets, PublicRetweets).asJava)

val IS\_REPLIED\_REPLY\_BLOCKED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_blocked\_by\_author",

Set(Blocks, EngagementsPrivate, EngagementsPublic).asJava)

val IS\_REPLIED\_REPLY\_FOLLOWED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_followed\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, Follow).asJava)

val IS\_REPLIED\_REPLY\_UNFOLLOWED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_unfollowed\_by\_author",

Set(EngagementsPrivate, EngagementsPublic).asJava)

val IS\_REPLIED\_REPLY\_MUTED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_muted\_by\_author",

Set(Mutes, EngagementsPrivate).asJava)

val IS\_REPLIED\_REPLY\_REPORTED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_replied\_reply\_reported\_by\_author",

Set(EngagementsPrivate).asJava)

// Reciprocal engagements for fav forward engagement

val IS\_FAVORITED\_FAV\_FAVORITED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_favorited\_fav\_favorited\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateLikes, PublicLikes).asJava

)

val IS\_FAVORITED\_FAV\_REPLIED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_favorited\_fav\_replied\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateReplies, PublicReplies).asJava

)

val IS\_FAVORITED\_FAV\_RETWEETED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_favorited\_fav\_retweeted\_by\_author",

Set(EngagementsPrivate, EngagementsPublic, PrivateRetweets, PublicRetweets).asJava

)

val IS\_FAVORITED\_FAV\_FOLLOWED\_BY\_AUTHOR = new Binary(

"timelines.engagement.is\_favorited\_fav\_followed\_by\_author",

Set(EngagementsPrivate, EngagementsPublic).asJava

)

// define good profile click by considering following engagements (follow, fav, reply, retweet, etc.) at profile page

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_FOLLOW = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_follow",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate, Follow).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_FAV = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_fav",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate, PrivateLikes, PublicLikes).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_REPLY = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_reply",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate, PrivateReplies, PublicReplies).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_RETWEET = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_retweet",

Set(

ProfilesViewed,

ProfilesClicked,

EngagementsPrivate,

PrivateRetweets,

PublicRetweets).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_TWEET\_CLICK = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_tweet\_click",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate, TweetsClicked).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_SHARE\_DM\_CLICK = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_share\_dm\_click",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

// This derived label is the union of all binary features above

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_ENGAGED = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_engaged",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate, EngagementsPublic).asJava)

// define bad profile click by considering following engagements (user report, tweet report, mute, block, etc) at profile page

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_USER\_REPORT\_CLICK = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_user\_report\_click",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_TWEET\_REPORT\_CLICK = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_tweet\_report\_click",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_MUTE = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_mute",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_PROFILE\_CLICKED\_AND\_PROFILE\_BLOCK = new Binary(

"timelines.engagement.is\_profile\_clicked\_and\_profile\_block",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

// This derived label is the union of bad profile click engagements and existing negative feedback

val IS\_NEGATIVE\_FEEDBACK\_V2 = new Binary(

"timelines.engagement.is\_negative\_feedback\_v2",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

val IS\_NEGATIVE\_FEEDBACK\_UNION = new Binary(

"timelines.engagement.is\_negative\_feedback\_union",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

// don't like, mute or profile page -> mute

val IS\_WEAK\_NEGATIVE\_FEEDBACK = new Binary(

"timelines.engagement.is\_weak\_negative\_feedback",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

// report, block or profile page -> report, block

val IS\_STRONG\_NEGATIVE\_FEEDBACK = new Binary(

"timelines.engagement.is\_strong\_negative\_feedback",

Set(ProfilesViewed, ProfilesClicked, EngagementsPrivate).asJava)

// engagement for following user from any surface area

val IS\_FOLLOWED\_FROM\_ANY\_SURFACE\_AREA = new Binary(

"timelines.engagement.is\_followed\_from\_any\_surface\_area",

Set(EngagementsPublic, EngagementsPrivate).asJava)

val IS\_RELEVANCE\_PROMPT\_YES\_CLICKED = new Binary(

"timelines.engagement.is\_relevance\_prompt\_yes\_clicked",

Set(EngagementsPublic, EngagementsPrivate).asJava)

// Reply downvote engagements

val IS\_REPLY\_DOWNVOTED =

new Binary("timelines.engagement.is\_reply\_downvoted", Set(EngagementsPrivate).asJava)

val IS\_REPLY\_DOWNVOTE\_REMOVED =

new Binary("timelines.engagement.is\_reply\_downvote\_removed", Set(EngagementsPrivate).asJava)

/\*\*

\* Contains all engagements that are used/consumed by real-time

\* aggregates summingbird jobs. These engagements need to be

\* extractable from [[ClientEvent]].

\*/

val EngagementsRealTime: Set[Feature[JBoolean]] = Set(

IS\_CLICKED,

IS\_DWELLED,

IS\_FAVORITED,

IS\_FOLLOWED,

IS\_OPEN\_LINKED,

IS\_PHOTO\_EXPANDED,

IS\_PROFILE\_CLICKED,

IS\_QUOTED,

IS\_REPLIED,

IS\_RETWEETED,

IS\_RETWEETED\_WITHOUT\_QUOTE,

IS\_SHARE\_DM\_CLICKED,

IS\_SHARE\_DM\_SENT,

IS\_VIDEO\_PLAYBACK\_50,

IS\_VIDEO\_VIEWED,

IS\_VIDEO\_QUALITY\_VIEWED

)

val NegativeEngagementsRealTime: Set[Feature[JBoolean]] = Set(

IS\_REPORT\_TWEET\_CLICKED,

IS\_BLOCK\_CLICKED,

IS\_MUTE\_CLICKED

)

val NegativeEngagementsRealTimeDontLike: Set[Feature[JBoolean]] = Set(

IS\_DONT\_LIKE

)

val NegativeEngagementsSecondary: Set[Feature[JBoolean]] = Set(

IS\_NOT\_INTERESTED\_IN\_TOPIC,

IS\_NOT\_ABOUT\_TOPIC,

IS\_NOT\_RECENT,

IS\_NOT\_RELEVANT,

IS\_SEE\_FEWER,

IS\_UNFOLLOW\_TOPIC

)

val PrivateEngagements: Set[Feature[JBoolean]] = Set(

IS\_CLICKED,

IS\_DWELLED,

IS\_OPEN\_LINKED,

IS\_PHOTO\_EXPANDED,

IS\_PROFILE\_CLICKED,

IS\_QUOTED,

IS\_VIDEO\_PLAYBACK\_50,

IS\_VIDEO\_QUALITY\_VIEWED

)

val ImpressedEngagements: Set[Feature[JBoolean]] = Set(

IS\_IMPRESSED

)

val PrivateEngagementsV2: Set[Feature[JBoolean]] = Set(

IS\_CLICKED,

IS\_OPEN\_LINKED,

IS\_PHOTO\_EXPANDED,

IS\_PROFILE\_CLICKED,

IS\_VIDEO\_PLAYBACK\_50,

IS\_VIDEO\_QUALITY\_VIEWED

) ++ ImpressedEngagements

val CoreEngagements: Set[Feature[JBoolean]] = Set(

IS\_FAVORITED,

IS\_REPLIED,

IS\_RETWEETED

)

val DwellEngagements: Set[Feature[JBoolean]] = Set(

IS\_DWELLED

)

val PrivateCoreEngagements: Set[Feature[JBoolean]] = Set(

IS\_CLICKED,

IS\_OPEN\_LINKED,

IS\_PHOTO\_EXPANDED,

IS\_VIDEO\_PLAYBACK\_50,

IS\_VIDEO\_QUALITY\_VIEWED

)

val ConditionalEngagements: Set[Feature[JBoolean]] = Set(

IS\_GOOD\_CLICKED\_CONVO\_DESC\_V1,

IS\_GOOD\_CLICKED\_CONVO\_DESC\_V2,

IS\_GOOD\_CLICKED\_WITH\_DWELL\_SUM\_GTE\_60S

)

val ShareEngagements: Set[Feature[JBoolean]] = Set(

IS\_SHARED,

IS\_SHARE\_MENU\_CLICKED

)

val BookmarkEngagements: Set[Feature[JBoolean]] = Set(

IS\_BOOKMARKED

)

val TweetDetailDwellEngagements: Set[Feature[JBoolean]] = Set(

IS\_TWEET\_DETAIL\_DWELLED,

IS\_TWEET\_DETAIL\_DWELLED\_8\_SEC,

IS\_TWEET\_DETAIL\_DWELLED\_15\_SEC,

IS\_TWEET\_DETAIL\_DWELLED\_25\_SEC,

IS\_TWEET\_DETAIL\_DWELLED\_30\_SEC

)

val ProfileDwellEngagements: Set[Feature[JBoolean]] = Set(

IS\_PROFILE\_DWELLED,

IS\_PROFILE\_DWELLED\_10\_SEC,

IS\_PROFILE\_DWELLED\_20\_SEC,

IS\_PROFILE\_DWELLED\_30\_SEC

)

val FullscreenVideoDwellEngagements: Set[Feature[JBoolean]] = Set(

IS\_FULLSCREEN\_VIDEO\_DWELLED,

IS\_FULLSCREEN\_VIDEO\_DWELLED\_5\_SEC,

IS\_FULLSCREEN\_VIDEO\_DWELLED\_10\_SEC,

IS\_FULLSCREEN\_VIDEO\_DWELLED\_20\_SEC,

IS\_FULLSCREEN\_VIDEO\_DWELLED\_30\_SEC

)

// Please do not add new engagements here until having estimated the impact

// to capacity requirements. User-author real-time aggregates have a very

// large key space.

val UserAuthorEngagements: Set[Feature[JBoolean]] = CoreEngagements ++ DwellEngagements ++ Set(

IS\_CLICKED,

IS\_PROFILE\_CLICKED,

IS\_PHOTO\_EXPANDED,

IS\_VIDEO\_PLAYBACK\_50,

IS\_NEGATIVE\_FEEDBACK\_UNION

)

val ImplicitPositiveEngagements: Set[Feature[JBoolean]] = Set(

IS\_CLICKED,

IS\_DWELLED,

IS\_OPEN\_LINKED,

IS\_PROFILE\_CLICKED,

IS\_QUOTED,

IS\_VIDEO\_PLAYBACK\_50,

IS\_VIDEO\_QUALITY\_VIEWED,

IS\_TWEET\_DETAIL\_DWELLED,

IS\_GOOD\_CLICKED\_CONVO\_DESC\_V1,

IS\_GOOD\_CLICKED\_CONVO\_DESC\_V2,

IS\_SHARED,

IS\_SHARE\_MENU\_CLICKED,

IS\_SHARE\_DM\_SENT,

IS\_SHARE\_DM\_CLICKED

)

val ExplicitPositiveEngagements: Set[Feature[JBoolean]] = CoreEngagements ++ Set(

IS\_FOLLOWED,

IS\_QUOTED

)

val AllNegativeEngagements: Set[Feature[JBoolean]] =

NegativeEngagementsRealTime ++ NegativeEngagementsRealTimeDontLike ++ Set(

IS\_NOT\_RECENT,

IS\_NOT\_RELEVANT,

IS\_SEE\_FEWER

)

}