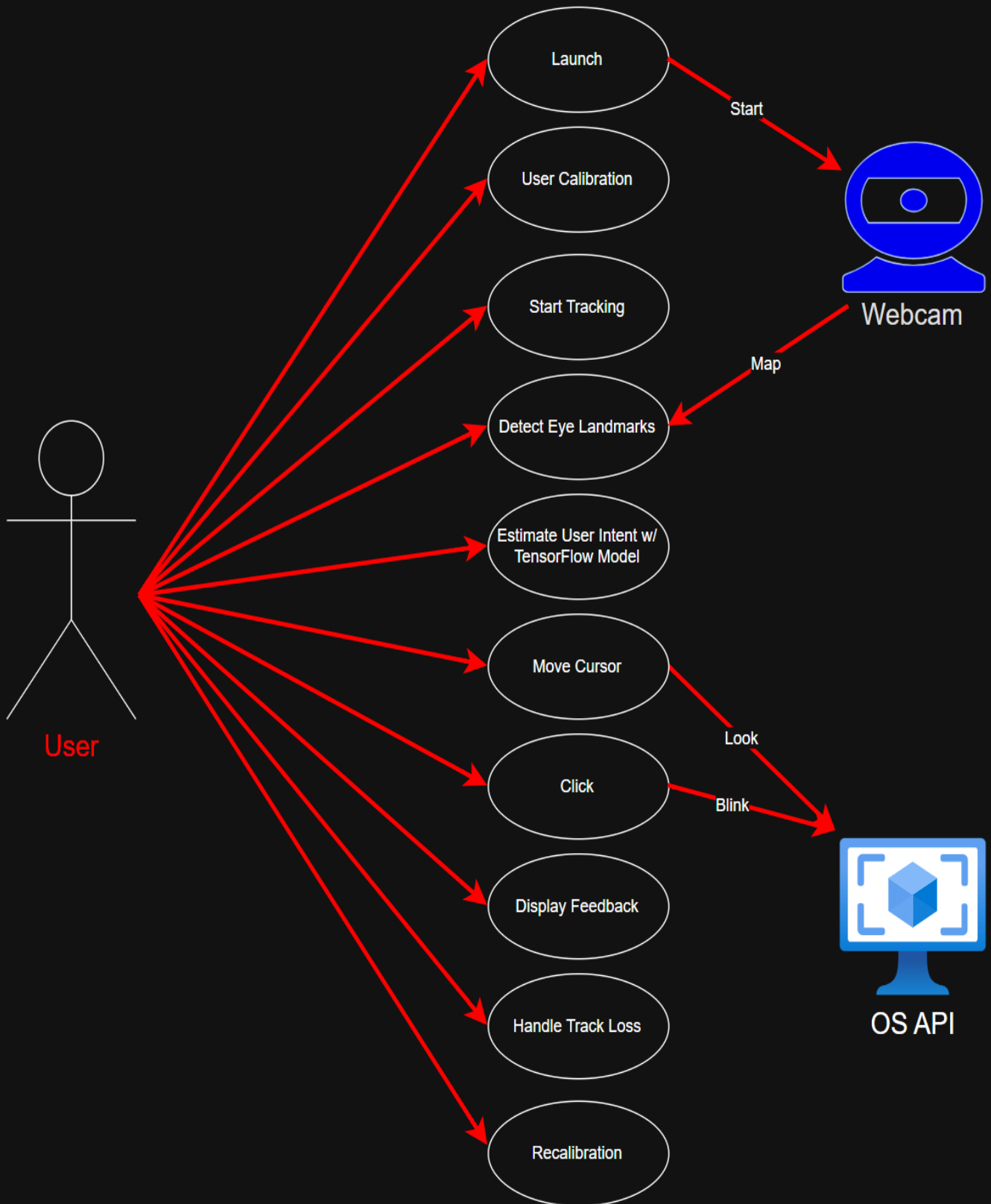# CursorVision: Models

01/30/2026
Software Development

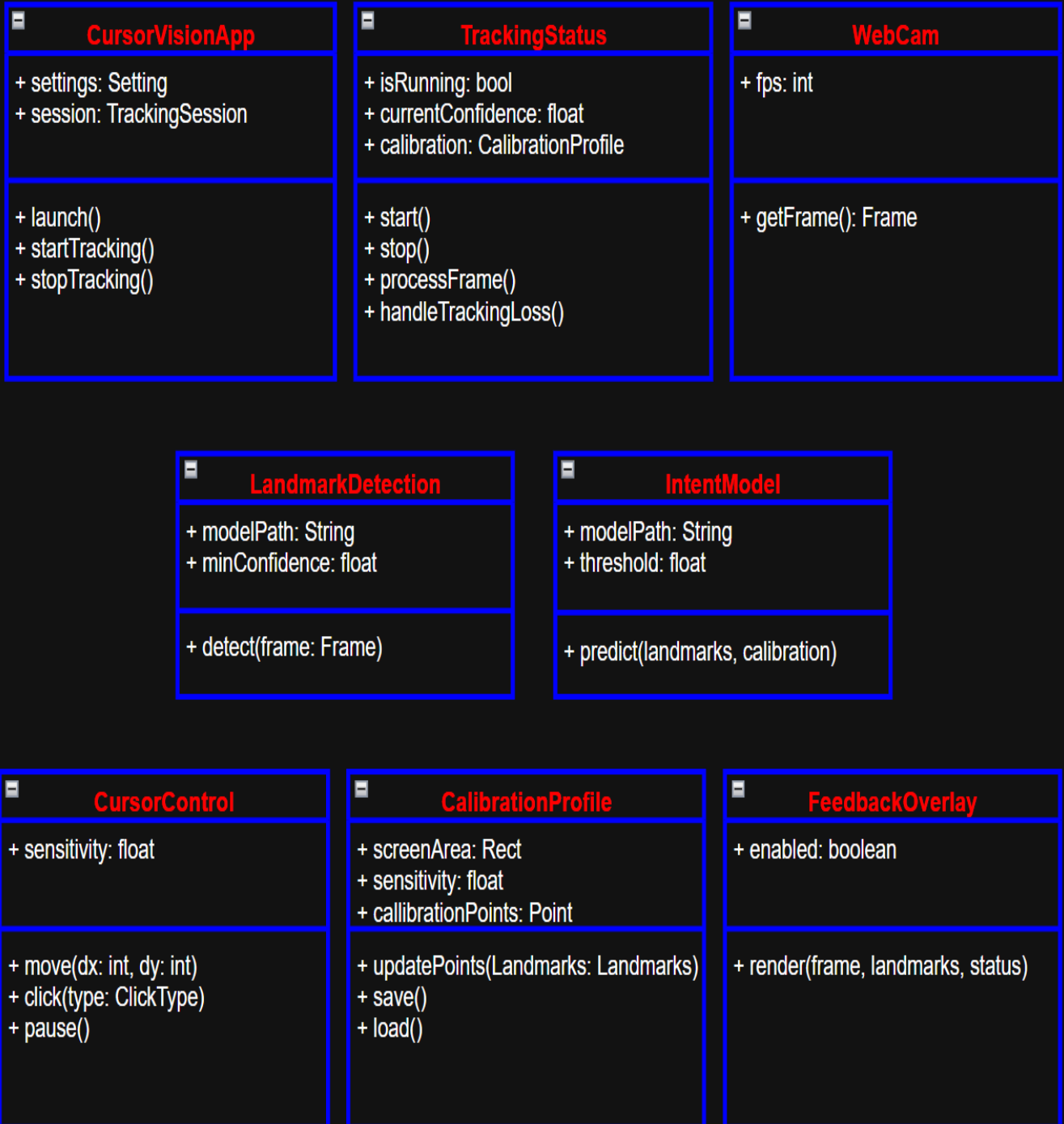*By: Kody Graham*
Non- Class Requirement:
Just to Help My Team and Myself
Visualize Our App Pre Production

Use Case Model:
CursorVision

User

Launch

User Calibration

Start Tracking

Detect Eye Landmarks

Estimate User Intent w/ TensorFlow Model

Move Cursor

Click

Display Feedback

Handle Track Loss

Recalibration

Webcam

OS API

Start

Map

Look

Blink

Class Model:
CursorVision

CursorVisionApp

+ settings: Setting
+ session: TrackingSession

+ launch()
+ startTracking()
+ stopTracking()

TrackingStatus

+ isRunning: bool
+ currentConfidence: float
+ calibration: CalibrationProfile

+ start()
+ stop()
+ processFrame()
+ handleTrackingLoss()

WebCam

+ fps: int

+ getFrame(): Frame

LandmarkDetection

+ modelPath: String
+ minConfidence: float

+ detect(frame: Frame)

IntentModel

+ modelPath: String
+ threshold: float

+ predict(landmarks, calibration)

CursorControl

+ sensitivity: float

+ move(dx: int, dy: int)
+ click(type: ClickType)
+ pause()

CalibrationProfile

+ screenArea: Rect
+ sensitivity: float
+ callibrationPoints: Point

+ updatePoints(Landmarks: Landmarks)
+ save()
+ load()

FeedbackOverlay

+ enabled: boolean

+ render(frame, landmarks, status)

There are several more classes expected. this is just a high level overview to cover main functionality.

Sequence Model:
CursorVision

User

| UI: CursorVisionApp | Track: TrackingSession | Cam: WebCam | Landmarks: LandmarkDetection | Intent: IntentModel | OS: CursorControl | Feedback: FeedbackOverlay |

NO — Exit_Check() — YES

Processes

Loop while isRunning

if (modelConfidence < threshold) : showTrackingLost

if (modelConfidence < threshold) : pause()

click(bool)

move(direction)

startApp()

startTracking()

recalibrate()   getFrame()

if (con < thresh)

frame

detect(frame)

landmarks

predict(landmarks, calibration)

intent(dx, dy, clickDecision, confidence)

prediction(landmarks, calibration)

render(frame, status)

Exit()