NoSQL Project proposal

For my Internet of things module, I am creating a doorbell camera system – a product similar to a Ring doorbell camera.

I would like to use MongoDB in order to manage events and triggers for this system.

To give a brief overview, the smart doorbell uses a motion sensor to trigger a server in the cloud to activate a person detection algorithm (pre-trained ML model). When a person is detected at the front entrance to the house, a notification will be sent to the homeowners phone.

Here is the sequence of events I have in mind:

1) When an object/person moves past the doorbell within a distance of two meters, an entry is added to the database: motion-trig <timestamp>
2) The person detection algorithm gets activated and runs for 30 seconds and within that timeframe if there is no person detected in the frame → send nothing to the DB, however if a person is detected, send a notification to the users phone at the other end.

    a) If the user does not click on the notification to initiate the call, record the person at the door, keeping the person detection algorithm running for the duration of the persons presence withing the frame.
    b) When the person exits the frame, keep the algorithm running for an additional 30 seconds and after that stop the recording.
3) If the user decides to initiate the call, stop the person detection algorithm and record the call for the entire duration until the user hangs up.
4) The recording is started as soon as a person gets detected by the algorithm and the 'is-call' property is set to false at the start -its only when the user clicks on the notification to join the call, this property is then set to true.