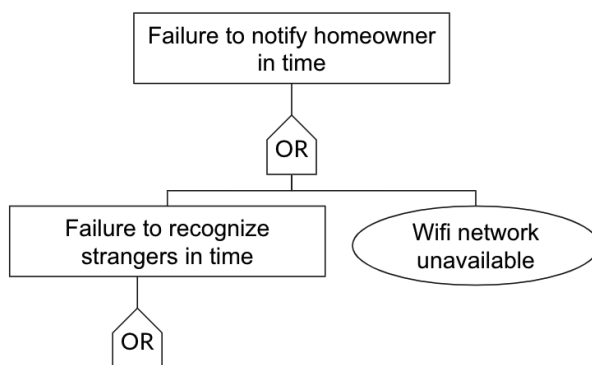


**Context:** Consider a home assistant robot that is capable of moving around obstacles in a home on its own. It has many capabilities to help around with household chores, but also has the capability to alert the head of the household (by sending a notification to their phone) if it detects that a stranger has entered the house.<sup>1</sup>

**Requirement:** The homeowner must be contacted in time if a stranger is present in the house

**Complete the fault tree:**



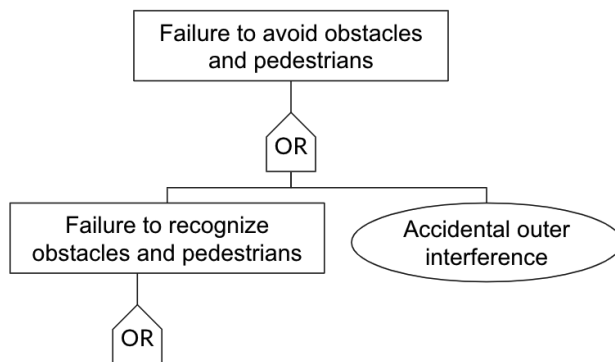
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<sup>1</sup> This is an excerpt from the Fall 2020 midterm: <https://github.com/ckaestne/seai/blob/F2020/exams/>

**Context:** Consider a delivery robot that is capable of delivering groceries for grocery stores like Trader Joe's and Aldi. It carries about the size of a full shopping cart, is battery powered (for up to 3h of operation before needing to recharge), has a detailed map of the sidewalks in the delivery range of the supermarket, has cameras in all directions and GPS sensors and can be remotely operated by a human operator when needed.<sup>2</sup>

**Requirement:** The robot must be able to avoid obstacles and pedestrians on the way.

**Complete the fault tree:**



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<sup>2</sup> This is an excerpt from the Spring 2021 midterm: <https://github.com/ckaestne/seai/tree/S2021/exams>