



Proposal Title

Subtitle (if any)

Author Name

Supervisors:
Supervisor 1
Supervisor 2
Supervisor 3

Umm Al-Qura University

July 5, 2024

1 Proposal Title

Title of the proposal

2 Abstract

A brief summary of the research, including objectives, methods, and expected outcomes (more than 150 words).

3 Proposal Keywords

Keyword 1, Keyword 2, Keyword 3, Keyword 4, Keyword 5, Keyword 6

4 Focus Areas

Select one of the research topics. Examples:

1. Traffic Control and Road Management

- **Dedicated Routes:** Specific roads and lanes are designated for pilgrim buses and emergency vehicles to ensure smooth flow and accessibility.
- **Traffic Diversions:** Local authorities often implement diversions and alternate routes to manage congestion in high-traffic areas.

2. Public Transportation Systems

- **Pilgrim Buses:** Large fleets of buses transport pilgrims between holy sites and accommodation areas, with schedules synchronized to accommodate the flow of pilgrims during peak times.
- **Metro and Train Services:** In recent years, Saudi Arabia has expanded metro and train services to provide additional transportation options for pilgrims, reducing congestion on roads.

3. Information and Communication Technology (ICT) Solutions

- **Real-Time Updates:** Mobile apps and digital screens provide real-time updates on transportation schedules, crowd densities at various locations, and emergency notifications.
- **GPS Tracking:** Pilgrims can track the location of transportation services, ensuring efficient use and management of resources.

4. Crowd Control Measures

- **Physical Barriers:** Temporary barriers and fences are set up to guide pedestrian flows and prevent overcrowding at critical points such as entrances to holy sites.
- **Crowd Monitoring:** Surveillance cameras and crowd monitoring systems help authorities identify congested areas and deploy resources accordingly.

5. Emergency Response and Medical Facilities

- **Medical Tents and Stations:** Temporary medical facilities are set up along pilgrimage routes and at holy sites to provide immediate medical assistance.
- **Emergency Evacuation Plans:** Contingency plans are in place for rapid evacuation in case of emergencies or unforeseen events.

5 Background and Motivation

- Provide background information and context of the research problem.
- What is the research scope?
- What is the question or problem you are trying to answer or solve?
- Why is this important?
- How is it done today, and what are the current limitations and challenges?

6 Systematic Literature Review

- What is the state of the art in this area of research?
- Provide proper references.
- It is recommended that PRISMA guidelines be followed (<https://www.prisma-statement.org/>).

7 Aims and Objectives

- What are you trying to accomplish?
- How are you going to do the work?
- What is new in your approach? How is your approach going to be different from others?
- Why do you think it will be successful?
- Describe the novelty in your approach or how are you going to improve on current approaches.

8 Research Plan and Methodology

- Detailed plans and strategy of how you are going to accomplish the stated goals and objectives.
- Describe the scope of the project.
- Gantt chart for the timeline of the project.

9 Prototype Design and Implementation

Design a preliminary prototype to solve parts of the proposed problem (e.g., simple code using Python).

10 Success and Impact

- How will you know that you successfully achieved your project goals? What is the expected output of the project?
- Explain what the resulting success of the project would be and what impact could be achieved if the funding is awarded.
- In alignment with Vision 2030.
 - Who can benefit from the project's output? How are you going to reach them?
 - Provide a draft 'plan for the dissemination and exploitation of the project's results'.

first reference[1]

References

- [1] Muhammad Al-Hajj, Max S Wicha, Adalberto Benito-Hernandez, Sean J Morrison, and Michael F Clarke. Prospective identification of tumorigenic breast cancer cells. *Proceedings of the National Academy of Sciences*, 100(7):3983–3988, 2003.