

INVENTRA'25- PROJECT EXPO

PROJECT TITLE: A Real-Time AI Command Center for Emergency Dispatch: Triage, Resource Allocation, and Simulation

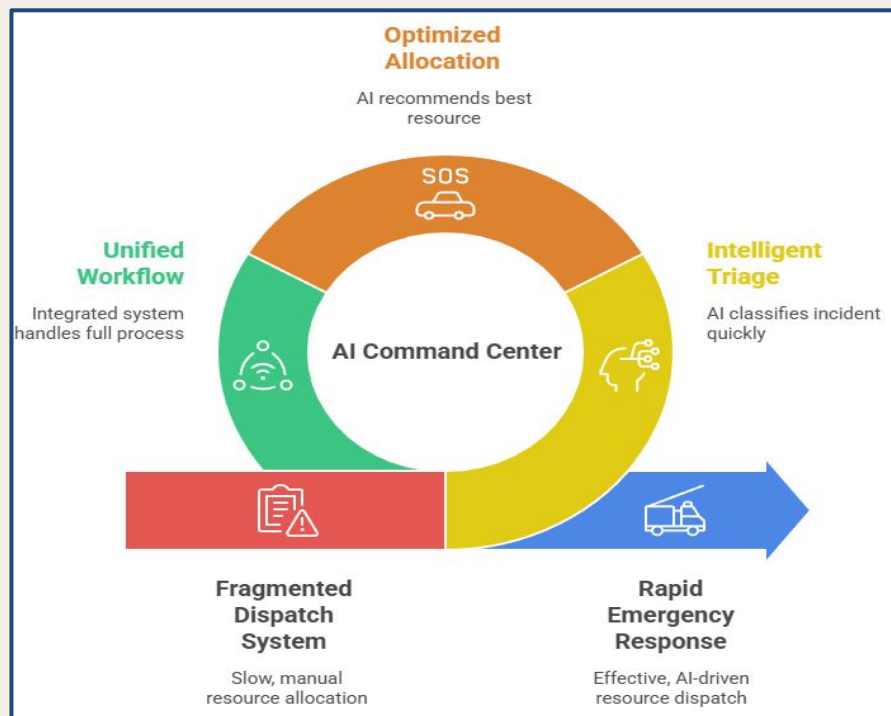
TEAM NO: CSE156

GUIDE: MR. SYED MOHSIN ABBASI

TEAM MEMBERS: FAIZAN AHMED , ZOYA ALAM , PAVITRA



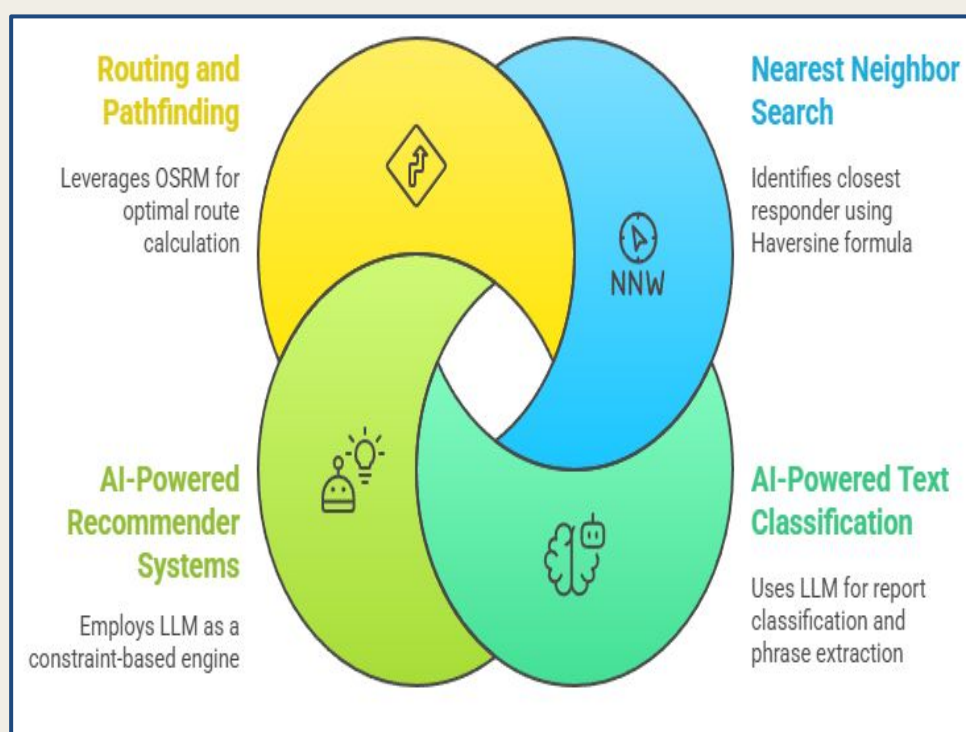
ABOUT THE PROJECT



RESULTS

- The AI triage model achieved high accuracy, with precision and recall between 0.96 and 1.00 across all emergency categories.
- OSRM routing consistently generated optimal driving paths, reducing simulated response times in both urban and high-traffic scenarios.
- In the “Airport Crash” disaster simulation, the system correctly triggered multi-agency dispatch and generated a full AI-based debrief report.
- Live mapping and fleet visualizations enabled real-time responder coordination, improving situational awareness and decision speed.
- Across 100 simulation scenarios, the Command Center demonstrated robust, reliable performance, validating end-to-end workflows from triage to debrief.

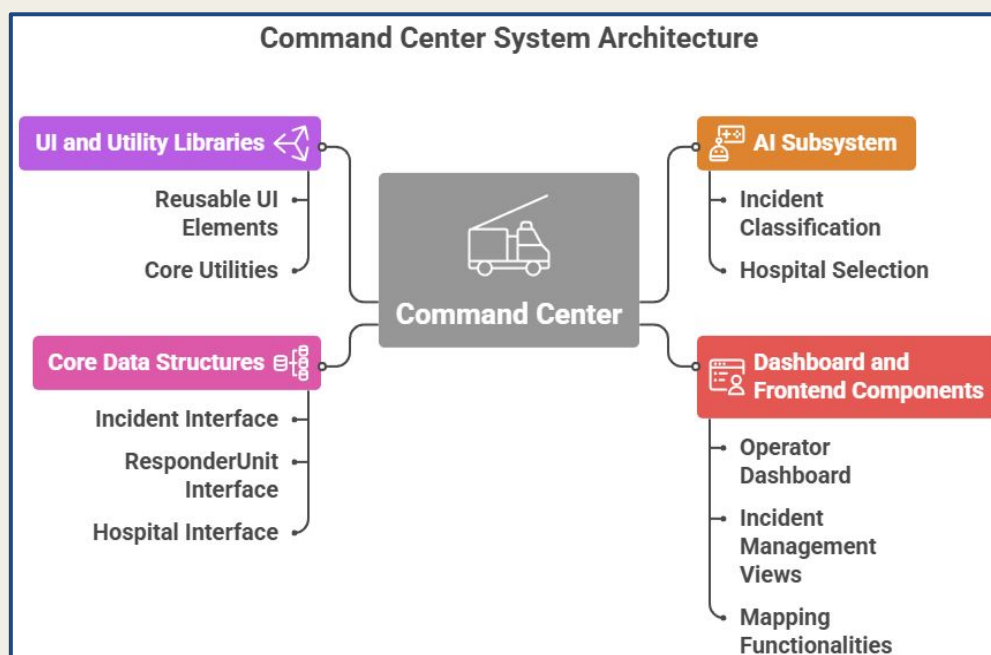
METHODS



DISCUSSION

- AI-driven triage and NLP models provide fast and accurate incident classification, even for complex emergencies.
- Intelligent dispatch and hospital recommendation algorithms ensure optimized resource allocation in real time.
- OSRM routing and live fleet visualization improve response efficiency and situational awareness.
- Automated incident debriefs help identify system gaps and improvement areas, enhancing reliability.
- The unified AI Command Center proves highly effective for both everyday emergencies and large-scale disaster scenarios.

ARCHITECTURE



CONCLUSION

- The AI Command Center significantly improves emergency response efficiency through integrated triage, dispatch, and routing workflows.
- High model accuracy and real-time routing demonstrate strong reliability and readiness for real-world deployment.
- Automated debriefing supports continuous system improvement and transparent performance evaluation.
- The platform is scalable and effective for both daily emergencies and large-scale disaster scenarios, making it a powerful smart-city solution.