

PROJECT NAME



AIR TRAFFIC CONTROL

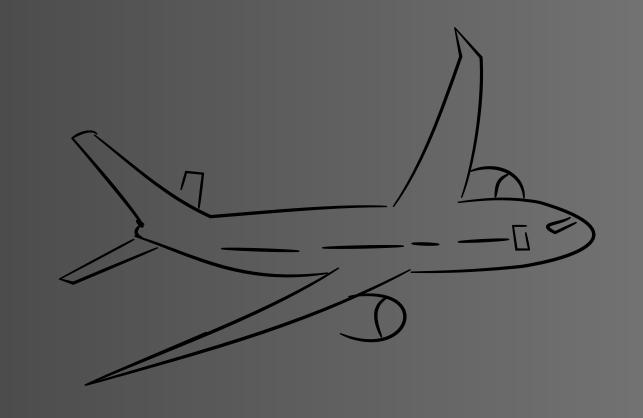


SYSTEM



WHY I CHOOSE THIS PROJECT

As an aviation enthusiast, I have always been fascinated by air traffic management and its role in ensuring safe and smooth air travel.

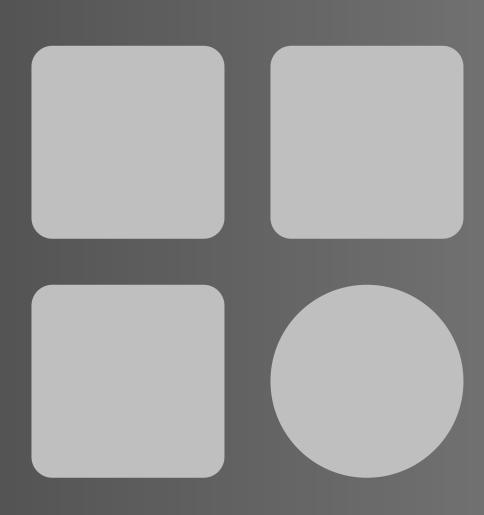




The challenge of simulating realtime flight coordination and handling critical situations motivates me to undertake this project.



I believe this system can be an excellent educational tool for aspiring air traffic controllers and enhance the understanding of aviation procedures.



Overview



The Air Traffic Control System is a simulation project aimed at creating a realistic air traffic management experience.

The main objective is to improve aviation safety and efficiency by simulating real-time flight coordination and safety measures.

This project is designed for aviation professionals, enthusiasts, and aspiring air traffic controllers.



Features

The Air Traffic Control System features a sophisticated flight coordination module that enables real-time communication between aircraft and control towers, ensuring safe takeoffs, landings, and route adjustments. Additionally, the integration of dynamic weather data influences flight paths and safety decisions, enhancing the realism of the simulation and challenging air traffic controllers to handle changing weather conditions effectively.

- 1 Flight Coordination:
- 2 Airspace Management:
- Weather Integration:
- 4 Collision Avoidance:
- 5 Interactive Control Interface:
- Real-time Communication:
- 7 Emergency Procedures:



Limitations

The Air Traffic Control System project may face limitations in real-time data processing due to the large volumes of data involved in simulating multiple aircraft and weather conditions simultaneously. Achieving complete realism in simulating air traffic can be challenging, and certain aspects may be simplified to maintain project scope and performance. Designing a user-friendly and feature-rich interface with C programming alone might require additional effort and expertise, as C is primarily a systems programming language and lacks modern GUI capabilities.

SOURCES:



https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/nas_ops/atcscc



https://www.sheffield.com/articles/how-air-traffic-control-systems-work



https://en.wikipedia.org/wiki/Air_traffic_control



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