

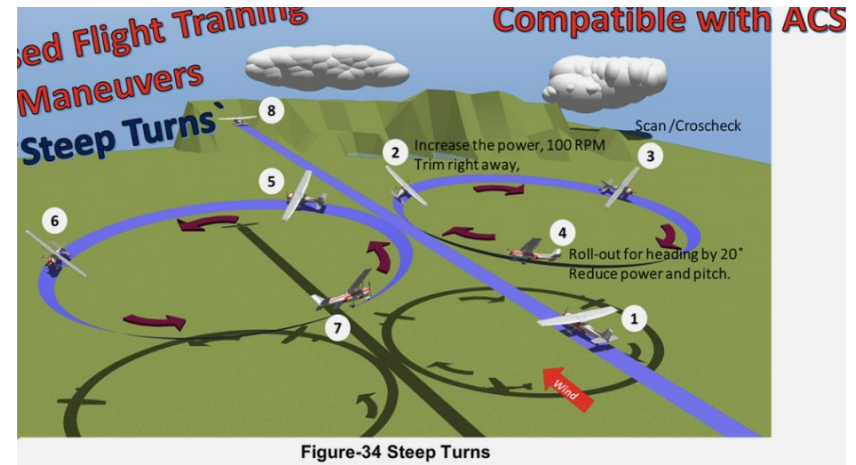
A fighter jet is shown from a low angle, flying over a runway. The jet's wings are spread wide, and its landing gear is visible. In the foreground, a white car with its emergency lights on is driving away from the camera. The background shows a clear sky and a distant horizon.

Pilot Insight

Team Idemo
Ben Chapman, Viraj Prakash, Adnan Shaker

What exactly is the problem? (Viraj)

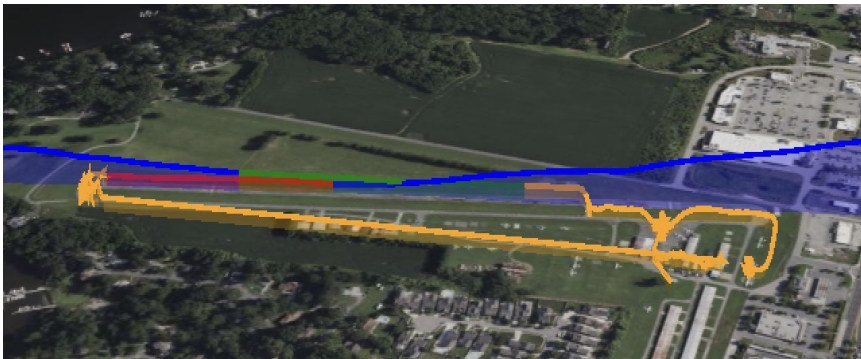
- Current postflight debriefing tools are confusing
- Pilots want to receive insights from previous flights



Skills	The applicant demonstrates the ability to:
PA.V.A.S1	Clear the area.
PA.V.A.S2	Establish the manufacturer's recommended airspeed; or if one is not available, an airspeed not to exceed V_A .
PA.V.A.S3	Roll into a coordinated 360° steep turn with approximately a 45° bank.
PA.V.A.S4	Perform the Task in the opposite direction, as specified by evaluator.
PA.V.A.S5	Maintain the entry altitude ± 100 feet, airspeed ± 10 knots, bank $\pm 5^\circ$, and roll out on the entry heading $\pm 10^\circ$.

Overview of Project (Viraj)

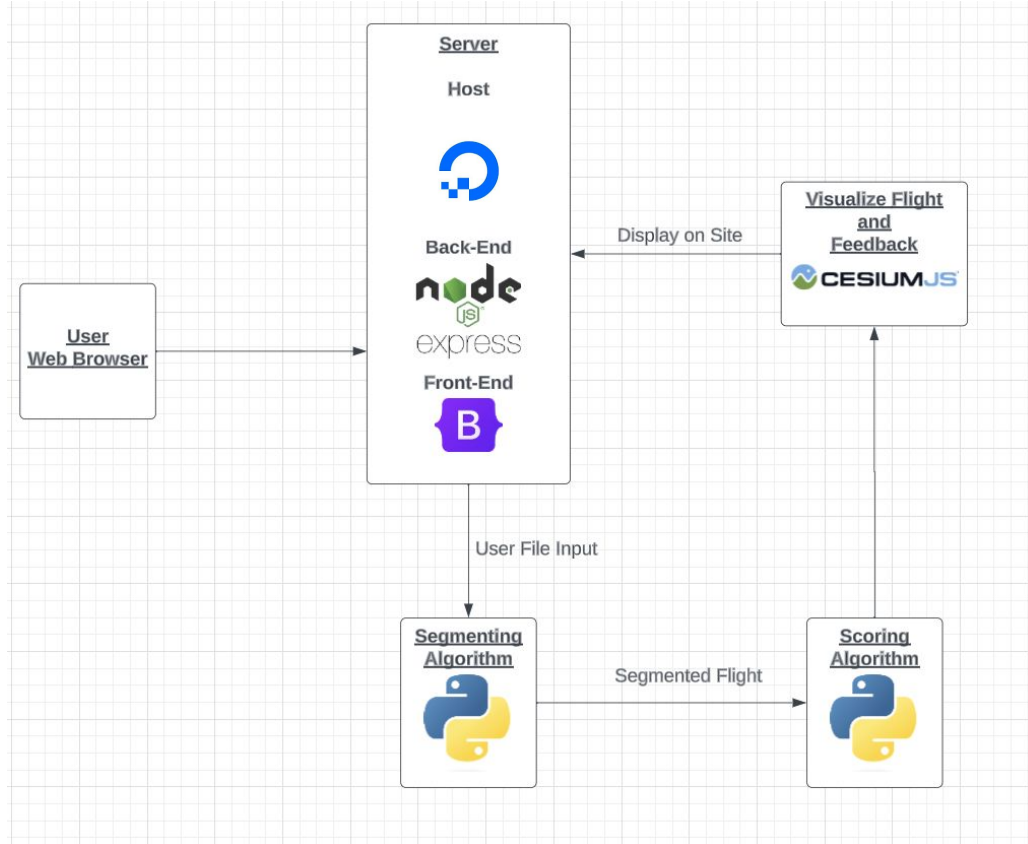
- Take in user flight data
- Display 3D worldview
- Provide tailored feedback from our scoring algorithm.
 - All based on maneuvers in FAA airman certification standards.



Segments

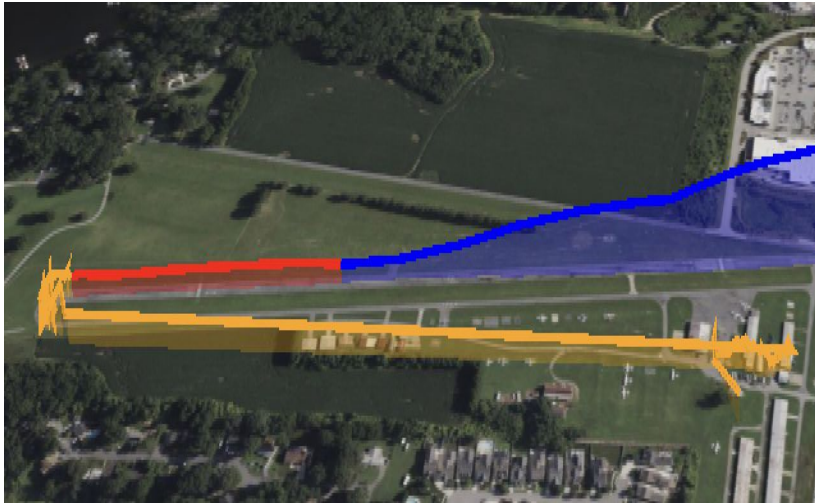
#	<input checked="" type="checkbox"/>	Segment	Start	End	Score	View
1	<input checked="" type="checkbox"/>	Taxi	00:00:00	00:05:25	NA	<button>Fly</button>
2	<input checked="" type="checkbox"/>	Takeoff	00:05:25	00:05:40	86.6	<button>Fly</button>
3	<input checked="" type="checkbox"/>	Airborne	00:05:40	00:44:20	NA	<button>Fly</button>
4	<input checked="" type="checkbox"/>	Landing	00:44:20	00:44:35	92.8	<button>Fly</button>
5	<input checked="" type="checkbox"/>	Taxi	00:44:35	00:46:35	NA	<button>Fly</button>
6	<input checked="" type="checkbox"/>	Takeoff	00:46:35	00:46:50	96.9	<button>Fly</button>
7	<input checked="" type="checkbox"/>	Airborne	00:46:50	00:53:59	NA	<button>Fly</button>
8	<input checked="" type="checkbox"/>	Touch and Go	00:53:59	00:54:39	NA	<button>Fly</button>
9	<input checked="" type="checkbox"/>	Airborne	00:54:39	01:00:20	NA	<button>Fly</button>
10	<input checked="" type="checkbox"/>	Touch and Go	01:00:20	01:01:00	NA	<button>Fly</button>

System Architecture Diagram (Adnan)

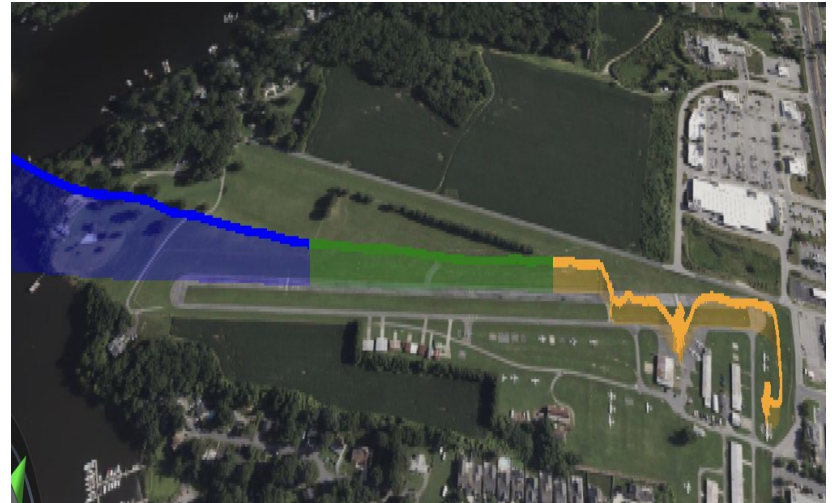


Takeoff & Landing Segmentation (Ben)

- Use ground speed in order to identify segments where takeoff / landing maneuvers are occurring.



TAKEOFF



LANDING

Other Segmentation (Ben)

Slow Flight:

- Segmented based off of airspeed, must be performed at or above 1500' AGL (above ground level)

Turn Around a Point:

- Segmented based off change in bank and altitude (must be between 800' and 1000')

Touch & Go:

- When the aircraft lands and takes off again in a 40 second time frame



TURN AROUND A POINT

Scoring System (Adnan)

Slow Flight:

- Score calculated based off of the deviation from the average slow flight speed performed during the maneuver.



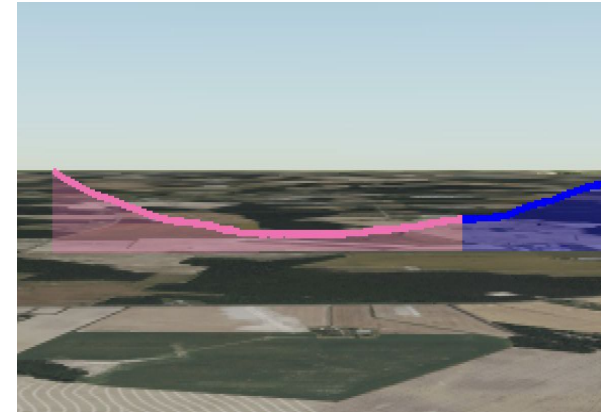
SLOW FLIGHT

Turn Around a Point:

- Calculated based off of the level of altitude control and speed control, as performed by the pilot.

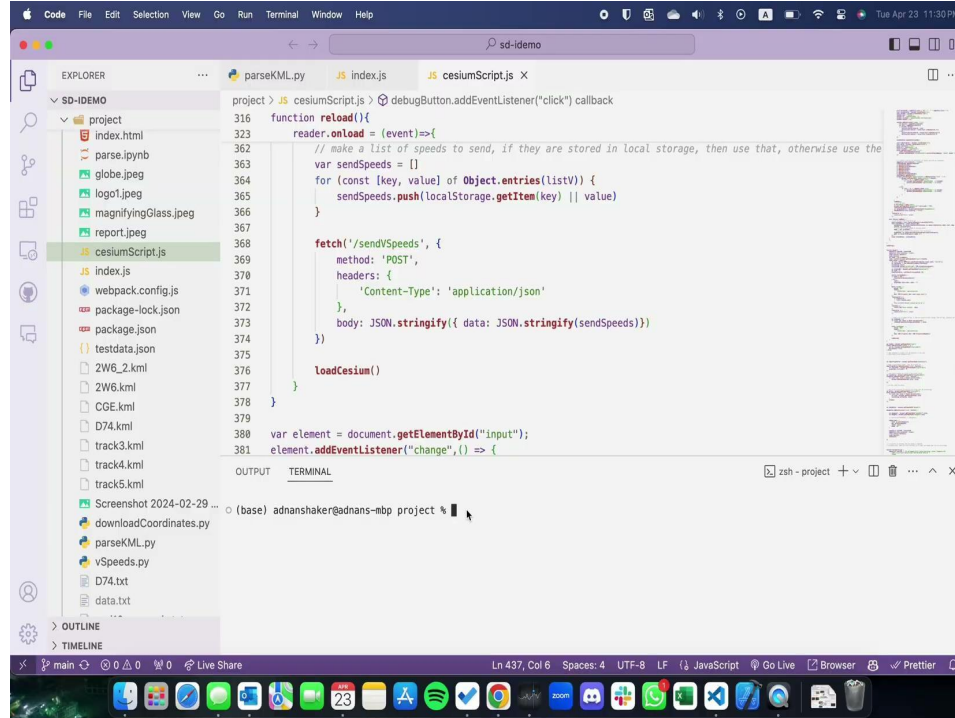
Takeoff / Landing / Touch & Go:

- Score calculated based off of the deviation from the average course performed during the maneuver.



TOUCH & GO

Walkthrough Video (Adnan)



**Thanks for
Listening**

Questions?
