



Air Traffic Management System (ATMS)

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Our Team



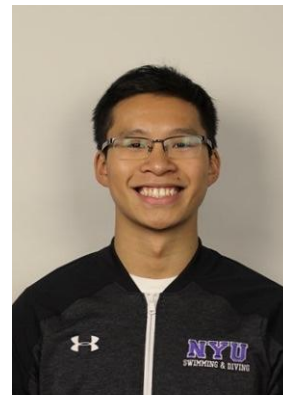
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UI/UX Designer and
Front-End Developer



Faizan Hussain
Testing and Back-End
Developer



Neh Kundalia
Lead Developer



Nick Tran
Front-End
Developer



Why should you  be interested?

Some Statistical Insights

- In 2019, almost 20% of the flights in the U.S. were delayed.
- JFK accounted for over 20,000 of those.



Status Quo

- Can you remember the last time you reached into the glove compartment of your car and pulled out a paper map?
- As the technology around us evolves, so do we. We advance to meet the changing times and take advantage of the newest device's technology has to offer.



How does it affect the industry?



“Passengers burn \$17 billion a year from delays, cancellations and missed connections, adding up to \$30 billion in losses to the US economy.”

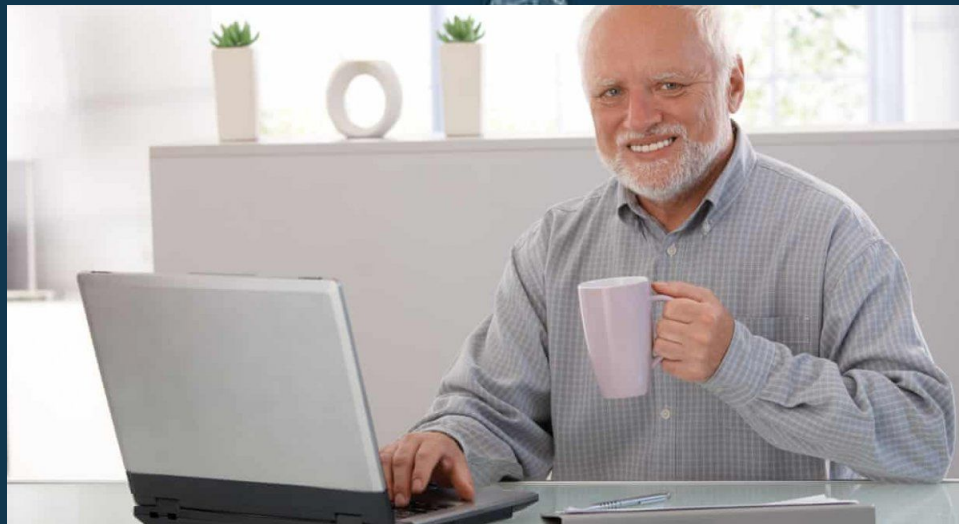


FLIGHT	DESTINATION	GATE	STATUS
650	ATLANTA GA	C24	ON TIME
256	AUCKLAND	C23	ON TIME
155	BANGKOK	A02	ON TIME
265	BEIJING	A05	BOARDING
156	CHICAGO IL ORD	F12	ON TIME
456	CHICAGO IL MDW	A24	ON TIME
458	CHENNAI	A03	ON TIME
789	CHRISTCHURCH	D12	ON TIME
987	DALLAS TX	C1	ON TIME
788	DELHI		ON TIME
999	DUBAI		ON TIME
784	HONG KONG		ON TIME
986	JUNEAU AK		ON TIME
985	KUALA LUMPUR		ON TIME

002	ON TIME
N12	BOARDING
N13	DELAYED
B06	DELAYED
D22	ON TIME
	DELAYED
C19	ON TIME
E21	ON TIME
D17	DELAYED
A22	ON TIME
A12	BOARDING
C17	ON TIME
B19	ON TIME

What can we do?

- Our product aims to take advantage of this opportunity in order to make flying better for everyone.
- Imagine a world without flight delays!



Can it be made better?

- We made a system that is more efficient without compromising on security.
- We let software do the bulk of the management, but with human oversight.



ATMS Functions

- Provide secure login and access to the system based on different users
 - Admin
 - Air Traffic Controllers
 - Pilots
- Provide automated assignment to gates and runways based on availability
- Maintain runway and gate information
- Allow the ATC to override system assignments in case of emergencies
 - Aid the human control by showing the availabilities in runways and gates



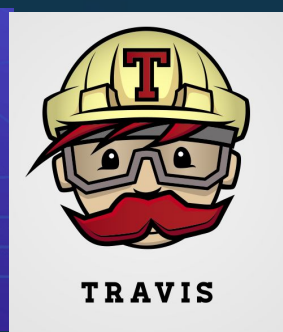
ATMS Non-Functional Requirements



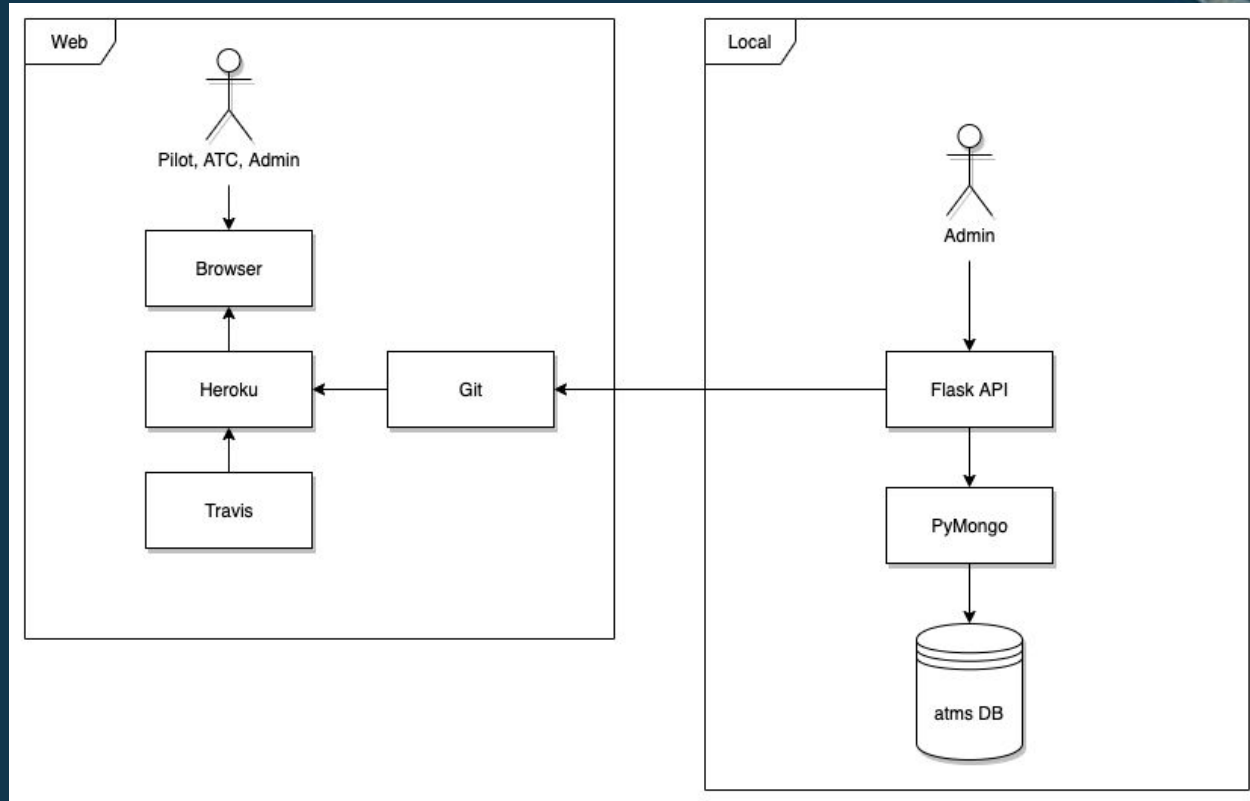
- Quick and responsive interface
- Secure Login and Authentication
- Web application and backend infrastructure will be available 24/7

Tech Stack

1. Python
2. Flask
3. MongoDB / Pymongo
4. Heroku
5. Travis
6. Git and GitHub



Component Diagram



Walkthrough



<https://jfkatms.herokuapp.com/>

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