

Analyze Incidents & Flights

CS3200 Final Project

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Report Summary: This analysis examines aircraft incident patterns across multiple dimensions including temporal trends, airline performance, and severity classifications. The data provides insights into incident frequency, associated delays, and safety metrics across the aviation industry.

Key Findings: - Monthly patterns reveal seasonal variations in incident types - Airline analysis shows variation in incident rates and delay impacts

- Yearly trends indicate overall safety trajectory - Severity analysis provides insight into incident impact levels

Data Sources: Aircraft incident database containing flight operations and safety records. **Analysis Date:** 2025-06-13

Analysis by Month

Table 1: Displaying records 1 - 10

Month	MonthNum	IncidentType	TotalIncidents
January	1	crew	116
January	1	faa	137
January	1	mechanical	124
January	1	medical	131
January	1	security	118
January	1	turbulence	102
January	1	weather	123
February	2	crew	202
February	2	faa	202
February	2	mechanical	249

Table 2: Monthly Incident Analysis by Type

Month	crew	faa	mechanical	medical	security	turbulence	weather	
1	January	116	137	124	131	118	102	123
8	February	202	202	249	218	225	248	225
15	March	210	244	223	219	234	221	227
22	April	221	245	221	236	251	221	219
29	May	239	229	218	229	259	244	272
36	June	236	232	244	224	248	212	206
43	July	217	253	251	251	232	244	243
50	August	241	242	247	214	255	218	242
57	September	244	215	241	249	235	261	226
64	October	268	233	211	216	231	238	232

71	November	231	242	234	252	245	245	221
78	December	118	120	113	103	122	113	129

Analysis by Airline

Table 3: Incident Analysis by Airline

Airline	Total Incidents	Average Delay (minutes)
AM	509	72.56
AZ	499	72.75
EK	491	72.52
JL	481	72.43
G3	481	76.49
TG	478	72.34
MH	478	72.44
DL	474	72.85
WN	472	74.58
LA	467	74.59
SQ	463	69.51
UA	462	74.02
KE	458	72.25
AC	456	73.70
LH	455	73.60
DY	454	76.11
AY	453	73.00
EY	450	76.06
IB	450	74.78
CZ	449	75.23
CX	449	74.06
AD	444	71.41
QR	442	72.23
U2	441	73.17
FR	440	75.84
AA	440	72.38
AV	440	72.99
NH	438	73.17
SU	435	74.17
BA	435	72.92
NZ	432	71.88
TK	430	75.40
OZ	429	72.04
MU	428	74.11
AI	428	75.98
KL	428	72.65
SV	427	75.88
AF	424	77.14
QF	423	70.64
VN	409	73.33

Trend by Year

Table 4: Displaying records 1 - 10

Year	TotalIncidents
2008	608
2009	1081
2010	1128
2011	1135
2012	1153
2013	1120
2014	1171
2015	1116
2016	1118
2017	1109

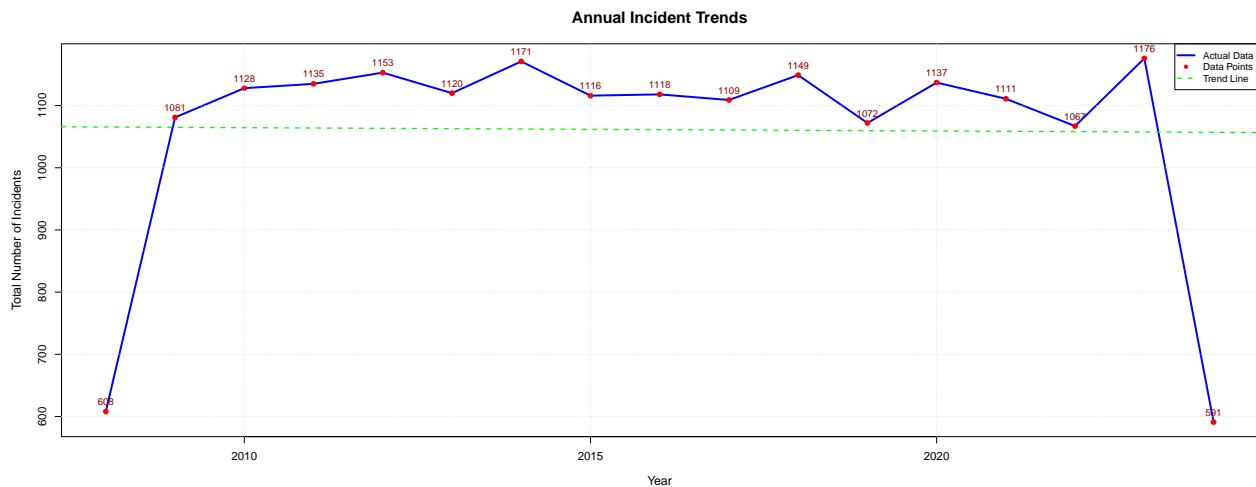


Table 5: Overall Incident Summary Statistics

Total Incidents	Avg Delay (min)	Max Delay (min)
18042	73.57	138
Min Delay (min)	Total Injuries	Years Spanned
10	2064	17

Table 6: Incident Analysis by Severity Level

Severity Level	Incident Count	Average Delay (min)	Average Injuries
minor	6097	74.09	0.12
critical	6050	73.45	0.11
major	5895	73.15	0.11

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## [1] TRUE
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