

Recommendations to Better Airplane Safety

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Introduction





Overview of Data

- Aviation Accident Database and Synopses by the National Transportation Safety Board
- Comprehensive accident data from 1962 - 2023
- Contains >90k incident records



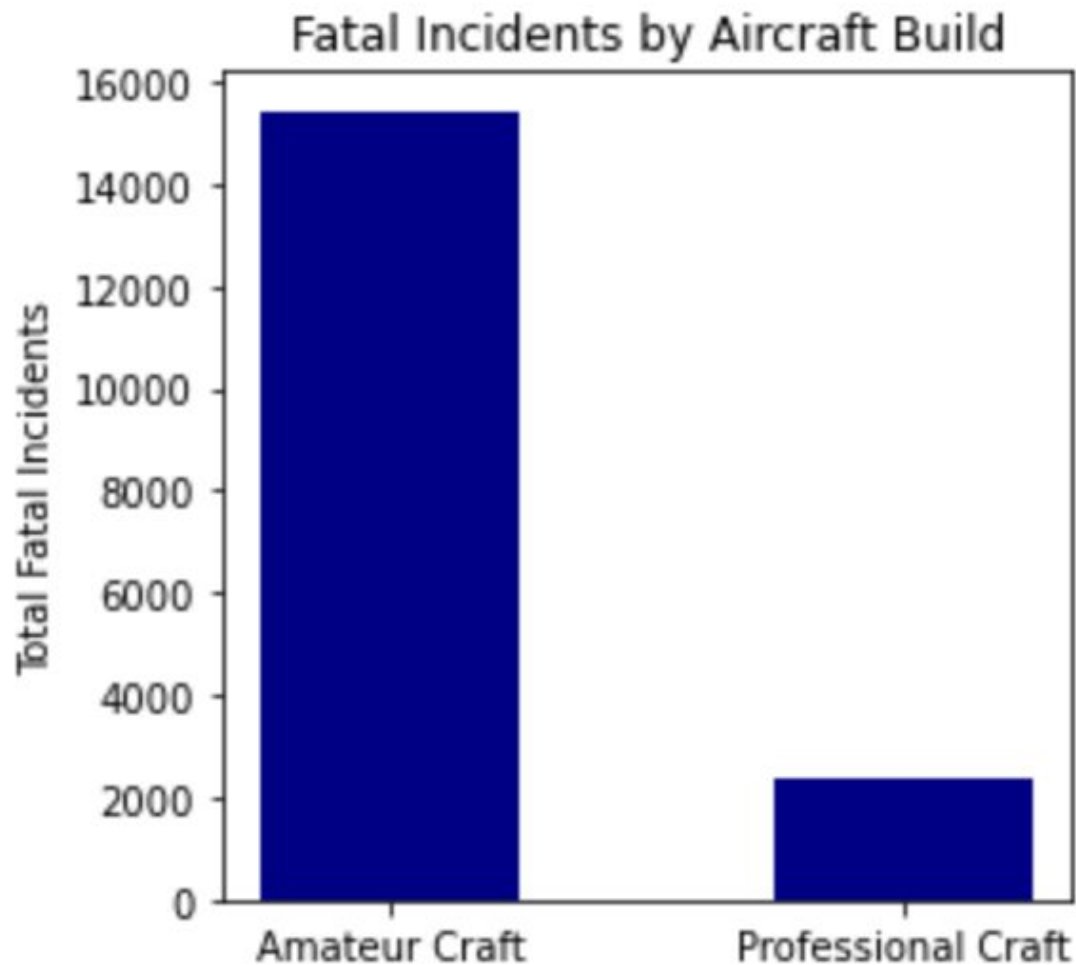
Overview of Data, cont.

- Grouped into types of crashes, weather conditions, airport information, flight phase, etc.
- Some information is not included or otherwise unknown
 - Data will necessitate some cleaning prior to analysis



Data Analysis



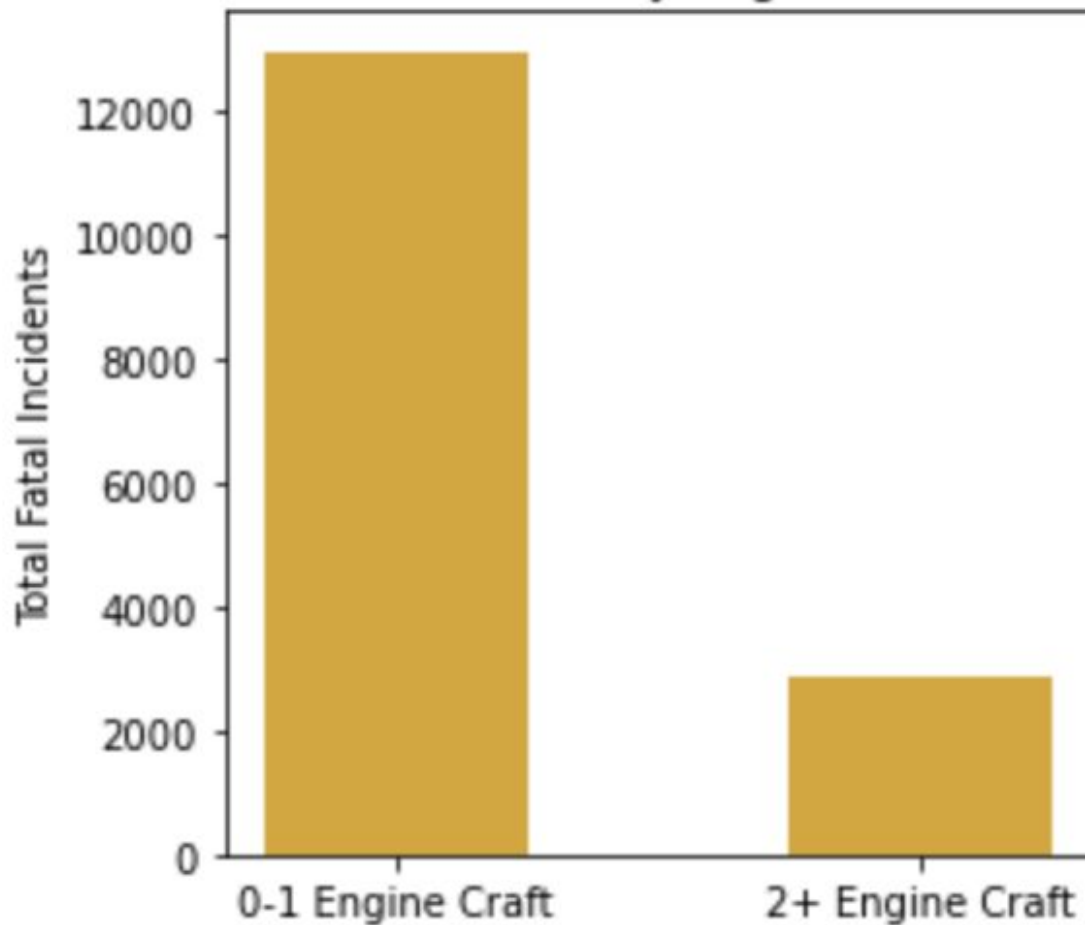


~15k fatal incidents with amateur craft

~3k fatal incidents with professional craft

~5x more fatal incidents with amateur craft than professional

Fatal Incidents by Engine Number

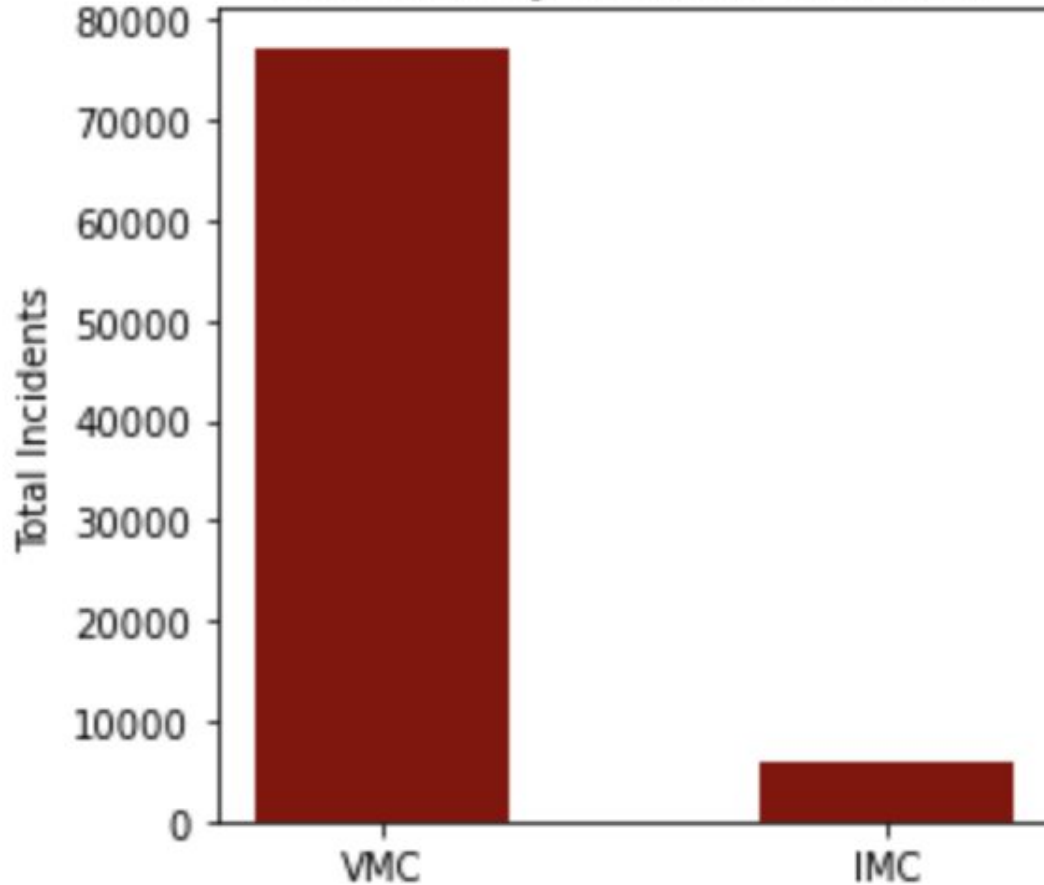


~13k fatal incidents with zero- or single-engine craft

~3k fatal incidents with multi-engine craft

~4x more fatal incidents with 0-1 engine craft than 2+ engine craft

Incidents by Weather Condition



~60k incidents in visual meteorological conditions

~10k incidents in instrument meteorological conditions

~6x more incidents under visual meteorological conditions than instrument meteorological conditions



Recommendations





Reducing Fatal Incidents and Incidents Overall

- Utilize professional aircraft
- Utilize multi-engine, larger aircraft
- Utilize robust aircraft instruments and tools



Questions?

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