

# Lecture 3: Boeing Casestudy

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# Learning Goals

- Understand issues around the Boeing 737 Max problems, and discuss how to avoid them
- Consider real and hypothetical solutions, and discuss when they are appropriate
- *We'll be asking you to do a quick survey after class, to give us feedback on how it goes!*

# A little bit more background...

- MCAS: Maneuvering Characteristics Augmentation System
- Why was it necessary?
  - Airbus was/is grabbing market share with more fuel efficient engines that didn't otherwise require changes to plane, training.
  - The Boeing 737 fuselage (first flight: 1968!) is closer to the ground than the equivalent Airbus 330. Bigger engines don't fit.
  - To make them fit, they mounted the engines farther up the plane.
  - ...but that changed the aerodynamics in a way that could lead to stalls in unusual situations.
  - MCAS: designed to detect those situations and automatically correct for them, without requiring additional pilot training.

# Breakout session 1: The Facts

- Step 1: Post to Slack your breakout room number (at the top of your window!) and your names/Andrew IDs.
- Create a shared google doc.
- Collaborate to create a list of as many *facts* about the Boeing case as you can come up with.

# Breakout session 2: Relationship Between Facts

- Same breakout rooms!
- Return to your shared google doc, copy over the facts we came up with together.
- Collaborate to identify as many *relationships between facts* as you can.

# Breakout session 3: Takeaways

- Same breakout rooms.
- Return to your shared google doc, copy over the facts we came up with together.
- Collaborate to identify as many *relationships between facts* as you can.