

CV 510<sub>1</sub>  
Modeling, Uncertainty, and  
Data for Engineers  
(July – Nov 2025)

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# Flow

- Announcement
- Module Outline
- Introduction and Motivation

# Announcement

- Next week classes
  - **No class** on Tuesday (9<sup>th</sup> Sep)
  - Wednesday and Thursday (10<sup>th</sup> and 11<sup>th</sup> Sep) usual class hours
  - **Additional class on Friday** (12<sup>th</sup> Sep at 8 AM)
- Check github regularly

# Why should you care about Risk & Reliability?

- Space Shuttle *Challenger* disaster (1986)

<https://www.youtube.com/watch?v=yibNEcn-4yQ>



**Catch-all approach:**

Build for every “what if” scenario: create backup for every imaginable scenario, even wildly unlikely ones

What could go wrong with this approach?

# Why should you care about Risk & Reliability?

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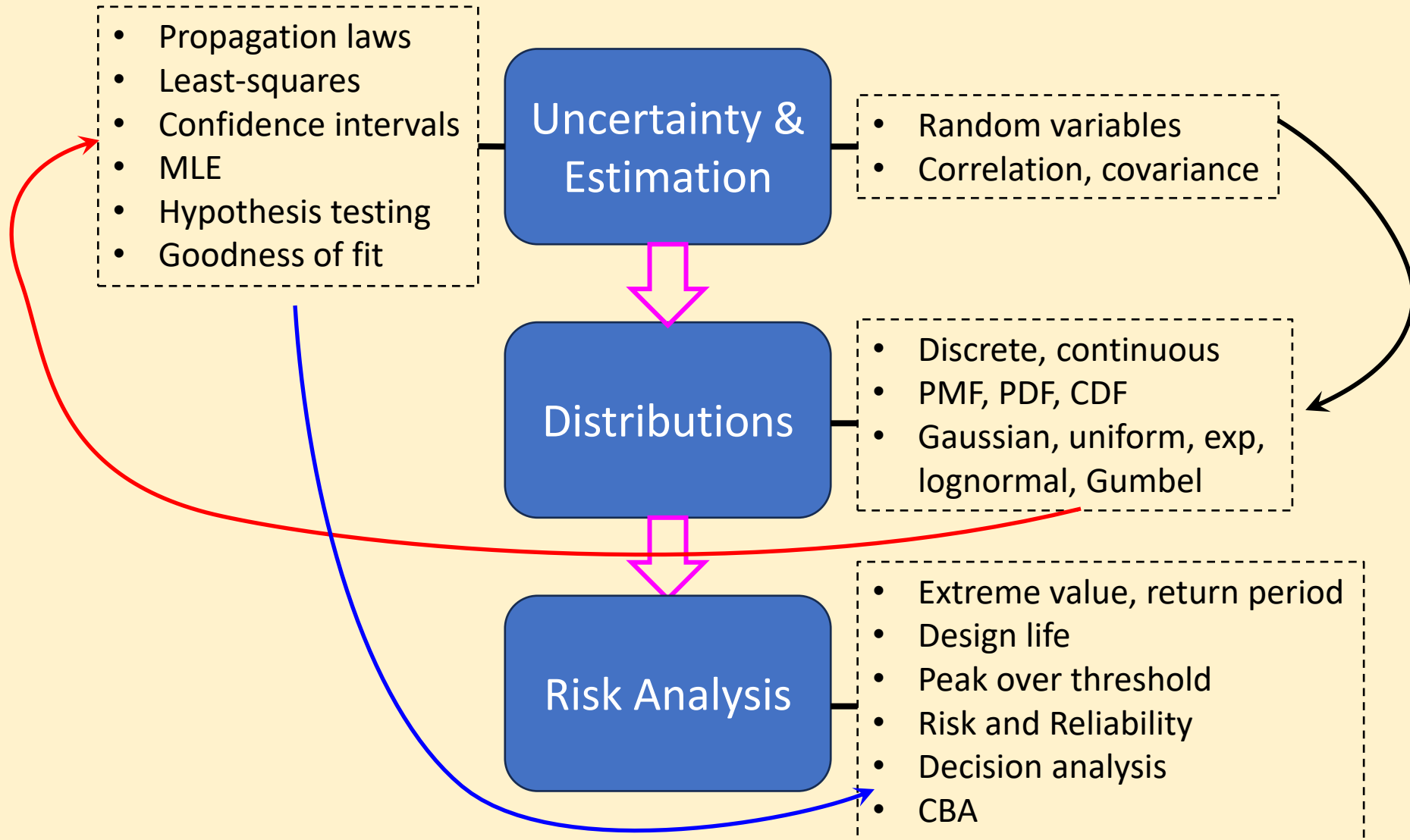
## Catch-all approach:

Build for every “what if” scenario: create backup for every imaginable scenario, even wildly unlikely ones

**Spreads engineers too thin:** divided resources, real threats do not get the focus they need

**Illusion of safety:** looks thorough on paper, but critical risks can slip through because everything is treated as equally important

# Module Overview



Questions, comments,  
or concerns?