

# Nirav's background

- Degrees in Aero/Astro from MIT
  - BS '01 and MS '04
  - MS Thesis focused on modularity and system evolution
  - Now pursuing PhD; looking at *systems of systems*
- Work experiences
  - Los Alamos National Labs -- developed models for 'as-is' vs. 'as-built' characterizations of engineered system (mostly worked on *parts*; one *system*)
  - Booz Allen Hamilton -- designed a process for conducting trade-studies

# Aero/Astro Approaches and Biases

Approach	Bias or Implication
The 'V' model	Systems can be understood through decomposition
One-or-a-few-off products	Craft/small batch production; low repeatability
Long system (relative to say MechE or EE) lifecycle	You won't maintain the system you build
Low tolerance for error -- you can't bring the S/C back to fix it.	Conservative engineering emphasizing reviews and careful decision making
Higher, faster, further	Performance and optimization driven culture fueled by records and prizes

Note: These are broad generalization. For a more in depth discussion see Murman (et al.)'s *Lean Enterprise Value* chapters 1-6.