Capabilities Statement

Corporate Name: **FEAD Consulting LLC**
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Headquartered in Orange County, CA, **FEAD Consulting** provides niche expertise in the areas of **modeling and analysis of complex mechanical systems** involving impacts, accidents, injuries, falls, mechanical failures in support of litigations and lawsuits. Through multibody dynamics modeling (MBD) in conjunction with structural (FEA) and aerodynamics (CFD) analyses, FEAD has the ability to accurate predict or reconstruct incident scenarios. Through more than a decade of experience in field together with large scale sensitivity analyses, simulation data are verified and validated to ensure highest level accuracy.

Core Capabilities

Accurate physics using multibody dynamics:

- Accident reconstruction,
- Physics-based Animations for court-case presentations
- Injury prediction and verification,
- Falls, trips and slips modeling (premises liability),
- Crash analysis and data validation,
- Mechanical failure analysis,
- Gait pattern analysis of crime scenes,

  and more…

Differentiators

- Verification of Complex MBD Analyses
- Large Stochastic MBD Runs for Simulation Validation
- Monte Carlo Analysis Post Processing App. For presentation large scale data.
- Physics-based visualization

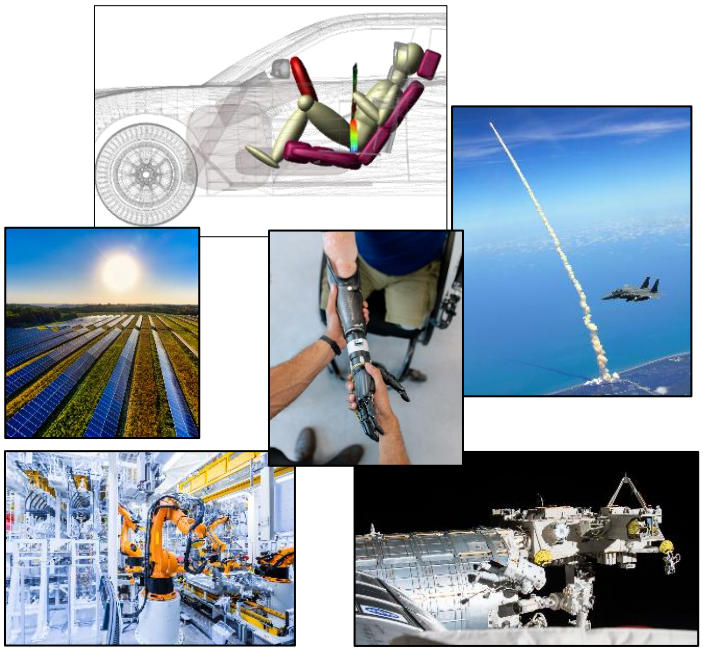
Applications

- *Transportation*: Automotive, Motorcycles, Bicycles, Scooters, Golf Carts, Boats, Jet Skis, Buses, Heavy Trucks
- *Recreational Accidents*: Exercise Equipment, Amusement Parks, Playground Incidents, Sports Injuries, Helmets/Personal Protective Equipment
- *Premises Liability*: Slips/Trips and Falls, Falling Objects
- *Industrial Accidents*: Heavy Equipment, Rotating Machinery, Hand Tools
- *Healthcare Incidents*: Surgical Devices, Orthopedic and Vascular Implants

Past Experience Highlights

- Analysis of accident-prone deployables:
  - Advanced model debugging and analysis support for Amazon Kuiper Project
  - Small Satellite Release Mechanism Development for European Agency
  - Advanced model debugging and analysis support for NASA Goddard Solar Array Dev. for James Web.
- Robotics modeling to ensure biomechanics comfort
  - Robotics Modeling for XPENG Robotics
  - Seat Modeling and Benchmarking for Fisher Dynamics
- CVT Modeling and Complex Contact Analysis for GM

  and more…



FEAD Consulting LLC

The Power of Computational Reality

Small Business
Unique Entity ID: LRHQPGRHPNE4
CAGE/NCAGE: 9RWE2

Partners: Hexagon, ETA, Saratech, Saviorin Space

NAIC Codes:
927110 - Space Research and Technology
541330 - Mechanical engineering services
541715 - Aerospace research and development 541715 - Engineering research and development laboratories or services