Apoorva Chintalacheruvu

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Mechanical engineer with a master's degree from University of Illinois at Chicago. Very well versed in design and analysis of complex multibody systems. Highly skilled in CAE/CAD tools especially in Solidworks, ANSYS and CATIA.

SKILLS

Engineering: Mutlibody Dynamics, Finite Element Analysis (FEA), Computer Aided Engineering, GD&T, CNC Programming, 3D Printing, HVAC
Software: Solidworks, ANSYS, CATIA, Inventor, MATLAB, Creo Parametric, AutoCAD, MSC Adams, Minitab, SIGMA/SAMS
Technologies: Python, Java, C

PROJECTS

Dynamic Analysis of Planar Slider Crank Mechanism

- Used SIGMA/SAMS, a multibody simulation software, to model and simulate the motion and deformation of a rigid slider crank mechanism with a flexible connecting rod.
- Created the flexible body using a finite element mesh with a floating frame of reference(FFR).
- Transverse deformation of the mid point of the connecting rod was plotted with respect to time.

CAD Design Project - Wheel hub of an All Terrain Vehicle

- Designed and optimized a wheel hub model for an all-terrain vehicle using CAE and CAD principles.
- Used ANSYS workbench and topology optimization tool to determine stress regions and areas of excess material.
- Additionally, modeled the suspension system parts such as the brake caliper, brake rotor, knuckle, spindle, upper and lower wishbones and the shock absorber.

A Review of Mechanics and Fatigue/Fracture of Hydrogels

- Performed a review of 20 papers related to the physical and chemical properties of hydrogels. Fracture and fatigue properties of hydrogels were studied in detail.

Baja Student India

- Designed and manufactured a dune buggy. Worked on vehicle chassis design along with transmission, suspensions and electrical systems.
- Additionally, handled the finances for this project.

Performance analysis of Coated Single Point Cutting Tools in Turning Operation

- Compared the performance of three types of carbide cutting tips for turning operation: CVD coated, nickel coated and uncoated.
- Determined the performance of each tip by measuring surface roughness of the job for various cutting parameters like depth of cut, cutting speed and feed rate.

EDUCATION

University of Illinois at Chicago — Chicago, IL
Master of Science — Mechanical Engineering, GPA: 3.71 — Aug 2018 - May 2020

- **Courses:** Advanced concepts in Computer Aided Engineering, Applied Stress Analysis, Compressible Flow Theory, Computational Analysis of Multibody Systems, Heating Ventilation and Air Conditioning (HVAC). Continuum Mechanics

CMR College of Engineering and Technology — Hyderabad, India
Bachelor of Technology — Mechanical Engineering GPA: 3.8 — Sept 2013 - June 2017