AYUSH THAPA

My professional and personal life

AYUSH THAPA
About me

ayushthapa.weebly.com 817-495-2077

Who am I?

- Mechanical Engineer Student interested in sustainable design manufacturing.
- Pursuing BS in Engineering from University of Texas Arlington.
- Born and Grew up in Nepal.
- Speaks Nepali, English, Hindi, and Bhojpuri.

What are my values?

- Believes in Compassion and Humility.
- Engineering must be used to solve the problems for greater good.
- Motivated and enthusiastic engineer.
- Believes in good interpersonal relationship.

What do I do outside work?

- Plays Soccer and Table Tennis.
- Likes to Workout.
- Loves to travel and discover new places.

What are my expectations in a work environment?

- Prefers places that promotes growth and values.
- Likes places where business and sustainability go side by side.
- Is not afraid of constructive criticism.

AYUSH THAPA
Professional Experience

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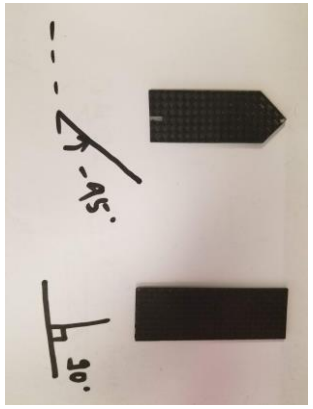
Institute for Predictive Performance Methodologies
UTARI UNIVERSITY OF TEXAS AT ARLINGTON RESEARCH INSTITUTE

R&D Intern // May 2018-Jan 2019

- Manufactured Composites materials like Carbon fiber and Glass Fiber Reinforced Plastic
- Operated Mechanical Testing Devices to test the mechanical properties of the manufactured composite materials.
- Introduced defects while manufacturing to analyze the change in mechanical properties.
- Designed 3-D models of test fixtures for the experiments using Solidworks and prototyped them.
- Expeditated the experiment time 50% by Rapid Prototyping using 3D printing and Computer-Aided Manufacturing.
- Drafted and presented the weekly report of the tests and experiments.



Carbon Fiber Reinforced Plastic

Glass Fiber Reinforced Plastic

UNIVERSITY OF TEXAS ARLINGTON Robotics and Biomechanics Lab

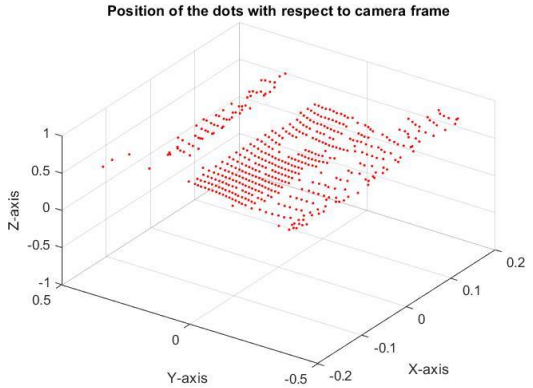
Undergraduate Research Assistant // Jan 2019-Present

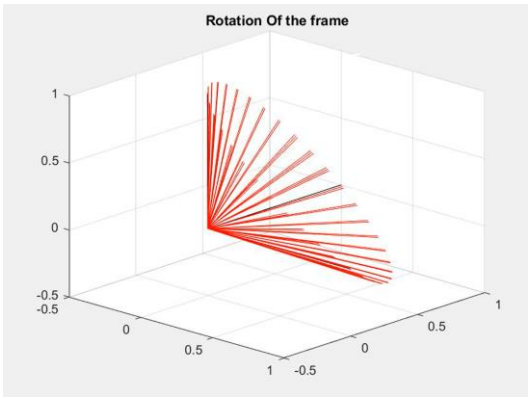
Dynamic Sensory Force Bed to Prevent Pressure Ulcer

- Created a 3-D point cloud model of the prototype bed using Intel's Stereoscopic camera and MATLAB.
- Improved the computational cost of analyzing every pixel of the bed's image using the point cloud method.
- Designed control system using ARDUINO microcontroller to control the pressure of the sensory force bed.

Dynamics of the Rotating Body having Six Degree of Freedom

- Conducted research to model the dynamic system of an object having six degrees of freedom using Quaternions.
- Studied the constraints and advantages of the Quaternions in comparison to Euler's classical rotation.





AYUSH THAPA
Senior Design Project

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UNIVERSITY OF TEXAS ARLINGTON

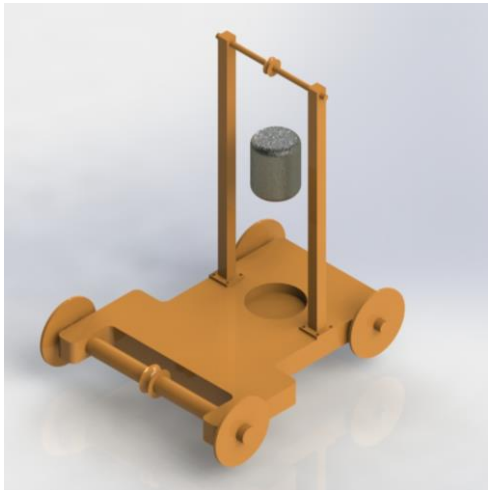
BS in Mechanical Engineering // Arlington, TX // Minor: Aerospace Engineering
2017 // GPA : 3.78

Relevant Projects
- Engineering Design Project-Designing and Simulating a Gravity Car.
- Senior Design Project-Designing an End Effector with the compliance . of Human Hand (Ongoing).
- Design and Optimization of Supersonic Airfoils.
- Kinematics of Four-bar Linkage and CAM design.

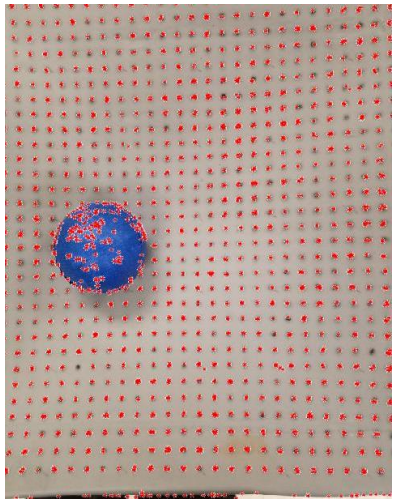
Relevant Courses
- Introduction to Engineering Design
- Thermodynamic I & II and Heat Transfer
- Kinematics and Dynamics of a machine
- Mechanics of Materials
- Computer Aided Engineering
- Dynamic System Modeling
- Automatic Controls
- Fluid Dynamics
- Calculus I, II, III, DifQ, and Linear Algebra
- Mechanical Vibration
- Compressible Flow
- Aerospace Propulsion

Surgical Drill

Dynamic Sensory Force Bed



Gravity Car



Mapping of a Force Bed

AYUSH THAPA
Me in pictures

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